

# DOCUMENT RESUME

ED 226 156

CE 034 988

**TITLE** Defense Economic Impact Modeling System (DEIMS).  
Skill Categories Included within Defense Impact Modeling System Skilled Labor Demand Model.

**INSTITUTION** Department of Defense, Washington, D.C.

**PUB DATE** Sep 82

**NOTE** 387p.; For a related document see CE 034 775.

**PUB TYPE** Statistical Data (110)

**EDRS PRICE** MF01/PC16 Plus Postage.

**DESCRIPTORS** Business Cycles; Data; Economics; \*Employment Projections; \*Expenditures; \*Labor Needs; \*Military Service; National Defense; \*Tables (Data); Vocational Education

**IDENTIFIERS** Defense Economic Impact Modeling System; \*Defense Expenditures; \*Economic Impact

## ABSTRACT

Updated Defense Economic Impact Modeling System (DEIMS) manpower data are provided. Skilled-labor demand by job categories and industrial sectors are estimated for 163 skill categories. Both defense and non-defense demands are presented for the years 1982 to 1987. The average annual percentage growth for the time period is also estimated. Data are provided for these industrial occupations that include the 163 skill categories: engineers, life and physical scientists and mathematicians, engineering and science technicians, health workers, technicians, computer specialists, social scientists and other professionals, business professionals and staff, craft and related workers, operatives, service workers, and laborers. (YLB)

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Specific material on the Defense Economic Impact Modeling System as listed in Appendices I through III can be obtained from the Defense Industrial Resources Support Office as listed above.

SKILL CATEGORIES INCLUDED WITHIN  
DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
SKILLED LABOR DEMAND MODEL\*

	<u>Aggregate Skill Categories</u>
ENGINEERS	(1)
Aero-Astronautic Engineers	(2)
Chemical Engineers	(3)
Civil Engineers	(4)
Electrical Engineers	(5)
Industrial Engineers	(6)
Mechanical Engineers	(7)
Metallurgical Engineers	(8)
Mining Engineers	(9)
Petroleum	(10)
Engineers, NEC	(11)
LIFE AND PHYSICAL SCIENTISTS & MATHEMATICIANS	(12)
Chemists	(13)
Physicists	(14)
Biological & Medical Scientists	(15)
Life and Physical Scientists, NEC	(16)
Mathematicians and Statisticians	(17)
Mathematical Specialists, NEC	(18)
ENGINEERING AND SCIENCE TECHNICIANS	(19)
Civil Engineering Technicians	(20)
Drafters	(21)
Electrical and Electronic Technicians	(22)
Industrial Engineering Technicians	(23)
Mechanical Engineering Technicians	(24)
Engineering and Science Technicians	(25)
HEALTH WORKERS	(26)
Dentists	(27)
Nurses, professional	(28)
Physicians, medical & osteopathic	(29)
Other Health Professionals	(30)
Other Health Workers	(31)
TECHNICIANS, exc. Health, Science, and Eng.	(32)
Airplane Pilots & Flight Engineers	(33)
Air Traffic Controllers	(34)
Radio Operators	(35)
Technical Assistants, Library	(36)
Tool Programmers, Numerical Control	(37)
Tech., exc. health, science, and eng, NEC	(38)
COMPUTER SPECIALISTS	(39)
Computer Programmers	(40)
Computer Systems Analysts	(41)
SOCIAL SCIENTISTS & other professionals	(42)
Economists	(43)
All Other Social Scientists	(44)

Teachers	(45)
College and University Teachers	(46)
Elementary and Secondary School Teachers	(47)
Vocational Education Teachers	(48)
Teachers, NEC	(49)
Selected Writers, Artists, and Entertainers	(50)
Professional & Technical Workers, NEC	(51)
BUSINESS PROFESSIONALS AND STAFF	(52)
Managers, Officials, and Proprietors	(53)
Sales Workers	(54)
Clerical Workers	(55)
Computer, peripheral equipment operators	(56)
Computer operators	(57)
Peripheral EDP equipment operators	(58)
Secretaries, Typists, & Other Office Machine Operators	(59)
Clerical Workers, NEC	(60)
CRAFT AND RELATED WORKERS	(61)
Construction Craft Workers	(62)
Electricians	(63)
Fitters, pipelaying	(64)
Plumbers and pipefitters	(65)
Refractory Materials Repairs	(66)
Shipwrights	(67)
Structural Steel Workers	(68)
Construction Craft Workers, NEC	(69)
Mechanics, Repairers, and Installers	(70)
Aircraft Mechanics	(71)
Auto Mechanics & Repairers	(72)
Data Processing Machine Mechanics	(73)
Diesel Mechanics	(74)
Electrical Instrument and Tool Repairers	(75)
Electric Motor Repairers	(76)
Engineering Equipment Mechanics	(77)
Instrument Repairers	(78)
Maintenance Mechanics, Repairers General Utility	(79)
Marine Mechanics and Repairers	(80)
Millwrights	(81)
Telephone Installers and Repairers	(82)
Mechanics, Repairers, and Installers, NEC	(83)
Metalworking Craft Workers, except mechanics	(84)
Blacksmiths	(85)
Boilermakers	(86)
Coremakers, hand, bench, floor	(87)
Forging Press Operators	(88)
Header Operators	(89)
Heat Treaters, Annealers, and Tenperers	(90)
Layout Markers, Metal	(91)
Machine Tool Setters, Metalworking	(92)
Machinists	(93)
Molders, metal	(94)
Molders, bench and floor	(95)
Molders, machine	(96)
All other molders, metal	(97)
Patternmakers, Metal	(98)
Punch Press Setters, Metal	(99)

Rolling Mill Operators and Helpers	(100)
Shear and Slitter Setters	(101)
Sheet-metal Workers and Tinsmiths	(102)
Tool and Die Makers	(103)
Metalworking Craft Workers, NEC	(104)
Printing Trades Craft Workers	(105)
Other Craft and Related Workers	(106)
Auxiliary Equipment Operators	(107)
Blue Collar Worker Supervisors	(108)
Heavy Equipment Operators	(109)
Inspectors	(110)
Lens Grinders	(111)
Machine Setters, Plastic Materials	(112)
Patternmakers, Wood	(113)
Patternmakers, NEC	(114)
Shipfitters	(115)
Shipengineers	(116)
Testers	(117)
Craft and Related Workers, NEC	(118)
OPERATIVES	(119)
Assemblers	(120)
Aircraft Structure and Surface Assemblers	(121)
Electrical and Electronic Assemblers	(122)
Electro-mechanical Equipment Assemblers	(123)
Instrument Makers and Assemblers	(124)
Machine Assemblers	(125)
Assemblers, NEC	(126)
Metalworking Operatives	(127)
Drill Press and Boring Machine Operators	(128)
Electroplators	(129)
Grinding and Abrading Machine Operators Metal	(130)
Heaters, Metal	(131)
Lathe Machine Operators, Metal	(132)
Machine Tool Operators, Combination	(133)
Machine Tool Operators, Numerical Control	(134)
Machine Tool Operators, Tool Room	(135)
Milling and Planning Machine Operators	(136)
Pourers, Metal	(137)
Power Break and Bending Machine Ops., Metal	(138)
Punch Press Operators, Metal	(139)
Welders and Flamecutters	(140)
Metalworking Operatives, NEC	(141)
All Other Operatives	(142)
Batch Plant Operators	(143)
Blasters	(144)
Boring Machine Operators, Wood	(145)
Coil Finishers	(146)
Cutters, Machine	(147)
Cutters, Portable Machine	(148)
Cutter-finisher Operators, Rubber Goods	(149)
Die Cutters, and Clicking Machine Operators	(150)
Drillers, Hand and Machine	(151)
Filers, Grinders, Buffers and Chippers	(152)
Furnance Operators and Tenders, Except Metal	(153)
Winding Operators, NEC	(154)

Writers, Electronic	(155)
Operatives, NEC	(156)
SERVICE WORKERS	(157)
Food Service Workers	(158)
Selected Health Service Workers	(159)
Protected Service Workers	(160)
Service Workers, NEC	(161)
LABORERS, except farm	(162)
Farmers and Farm Workers	(163)

\*Based on Bureau of Labor Statistics, National OES Matrices

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
1. ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.92
5. IRON ORE MINING	0.05	0.06	0.06	0.07	0.07	0.07	8.30
6. NONFERROUS METAL MINING	0.09	0.10	0.11	0.13	0.14	0.14	10.77
7. COAL MINING	0.10	0.12	0.13	0.15	0.16	0.17	11.15
8. CRUDE PETROLEUM & N. GAS	0.84	0.92	0.99	1.07	1.16	1.20	7.50
9. STONE & CLAY MINING & QUARRYING	0.02	0.02	0.02	0.03	0.03	0.03	9.96
10. CHEM & FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.89
11. NEW CONSTRUCTION	1.61	1.83	1.98	2.19	2.37	2.50	9.17
13. ORNANCE & ACCESSORIES	29.86	34.54	38.44	42.39	45.57	48.15	10.03
14. FOOD & KINDRED PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	5.19
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.03	0.03	0.03	0.03	5.03
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.02	0.02	7.10
18. APPAREL	0.01	0.01	0.01	0.01	0.01	0.01	6.08
19. MISC. FABRICATED TEXTILE PROD.	0.02	0.02	0.02	0.02	0.02	0.02	4.69
20. LUMBER & WOOD PRODUCTS	0.02	0.03	0.03	0.03	0.04	0.04	10.18
22. HOUSEHOLD FURNITURE	0.01	0.01	0.01	0.01	0.01	0.01	3.70
23. OTHER FURNITURE & FIXTURES	0.02	0.02	0.02	0.02	0.02	0.02	4.62
24. PAPER & ALLIED PRODUCTS	0.10	0.11	0.12	0.13	0.14	0.14	6.60
25. PAPERBOARD CONTAINERS & BOXES	0.02	0.02	0.02	0.02	0.03	0.03	8.77
26. PRINTING & PUBLISHING	0.03	0.03	0.03	0.03	0.03	0.03	5.93
27. CHEMICALS & PRODUCTS	1.00	1.12	1.22	1.33	1.45	1.53	8.89
28. PLASTICS & SYNTHETIC MATLS.	0.21	0.23	0.26	0.28	0.30	0.32	8.71
29. DRUGS, CLEANING & TOILET PREP.	0.02	0.02	0.02	0.02	0.02	0.02	4.18
30. PAINTS & ALLIED PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	8.23
31. PET REFINING & REL. PROD.	0.41	0.44	0.47	0.51	0.54	0.56	6.27
32. RUBBER & MISC. PLASTICS PROD.	0.22	0.25	0.28	0.31	0.34	0.36	10.33
35. GLASS & GLASS PRODUCTS	0.04	0.04	0.05	0.05	0.06	0.06	9.22
36. STONE & CLAY PRODUCTS	0.13	0.15	0.16	0.17	0.19	0.19	8.02
37. PRIMARY FERROUS METALS	0.62	0.70	0.77	0.84	0.90	0.95	8.75
38. NONFERROUS METALS	0.64	0.74	0.82	0.90	0.98	1.02	9.69
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	6.58
40. FAB. STRUCTURAL METAL PRODUCTS	0.59	0.67	0.71	0.77	0.82	0.86	7.88
41. SCREW MACHINE PROD. & STAMPINGS	0.22	0.24	0.26	0.28	0.30	0.31	7.71
42. OTHER FAB. METAL PRODUCTS	0.27	0.31	0.34	0.38	0.41	0.44	9.98
43. ENGINES & TURBINES	0.48	0.55	0.62	0.66	0.71	0.75	9.23
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	10.61
45. CONSTR. & MINING MACHINERY	0.12	0.13	0.15	0.16	0.18	0.18	9.27



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
1 ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
46. MATERIALS HANDLING MACH. & EQ.	0.20	0.24	0.26	0.30	0.32	0.34	11.18
47. METALWORKING MACH. & EQ.	0.57	0.67	0.75	0.85	0.94	1.00	11.79
48. SPECIAL INDUSTRY MACHINERY	0.04	0.05	0.05	0.06	0.07	0.08	13.72
49. GENERAL INDUSTRY MACHINERY	0.51	0.58	0.63	0.69	0.74	0.78	9.01
50. MISC. NONELECTRICAL MACH.	0.33	0.37	0.41	0.45	0.48	0.50	8.31
51. OFFICE, COMPUTING & ACCT. MACH.	1.72	2.00	2.20	2.40	2.53	2.63	8.84
52. SERVICE INDUSTRY MACHINES	0.07	0.09	0.10	0.11	0.13	0.14	14.77
53. ELECTRICAL MACHINERY	0.65	0.75	0.83	0.91	0.99	1.04	9.74
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.22	0.24	0.26	0.29	0.31	0.32	8.25
56. RADIO, TV, & COMMUNICATION EQ.	33.01	38.49	42.86	47.09	50.18	51.93	9.49
57. ELECTRONIC COMPONENTS & ACCESS.	6.21	7.52	8.61	9.78	10.83	11.51	13.14
58. MISC. ELECTRICAL MACH. & EQ.	0.15	0.18	0.19	0.21	0.23	0.24	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.38	0.46	0.52	0.62	0.73	0.85	17.26
60. AIRCRAFT & PARTS	32.18	37.20	41.85	47.12	51.39	53.76	10.81
61. OTHER TRANSPORTATION EQ.	1.64	1.73	1.78	1.82	1.87	1.92	3.19
62. INSTRUMENTS & SUPPLIES	3.57	4.07	4.49	4.96	5.34	5.58	9.30
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.37	0.41	0.45	0.50	0.54	0.57	8.92
64. MISC. MANUFACTURING	0.03	0.03	0.03	0.04	0.04	0.04	6.66
65. TRANSPORTATION & WAREHOUSING	0.33	0.35	0.36	0.39	0.40	0.40	4.01
66. COMMUNICATION EXC. RADIO & TV	0.82	0.89	0.96	1.06	1.14	1.18	7.51
67. RADIO & TV BROADCASTING	0.19	0.22	0.24	0.26	0.28	0.30	9.77
68. UTILITIES	0.68	0.75	0.82	0.89	0.95	0.98	7.66
69. WHOLESALE & RETAIL TRADE	0.31	0.35	0.39	0.43	0.47	0.49	9.57
70. FINANCE & INSURANCE	0.04	0.05	0.05	0.06	0.06	0.07	9.17
71. REAL ESTATE & RENTAL	0.02	0.02	0.02	0.02	0.02	0.02	8.38
72. PERSONAL SERVICES EXC. AUTO.	0.03	0.04	0.04	0.04	0.05	0.05	9.33
73. BUSINESS SERVICES	2.58	2.92	3.23	3.59	3.87	4.05	9.44
77. MISC. SERVICES	0.96	1.00	1.05	1.13	1.19	1.23	5.08
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	5.76	6.12	6.48	6.87	7.12	7.27	4.79
82. GOVERNMENT INDUSTRY	49.93	49.11	50.21	51.75	52.76	53.27	1.30
TOTAL, ALL INDUSTRIES	181.43	200.45	218.41	237.84	253.13	262.91	7.70
TOTAL EMPLOYMENT							
3. FORESTRY & FISHERY PRODUCTS	0.25	0.26	0.28	0.29	0.29	0.28	2.96
5. IRON ORE MINING	0.94	1.01	1.08	1.08	1.06	1.04	2.11
6. NONFERROUS METAL MINING	1.49	1.57	1.63	1.67	1.66	1.67	2.21
7. COAL MINING	3.62	3.90	4.13	4.31	4.53	4.69	5.35

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
1. ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
8. CRUDE PETROLEUM & N. GAS	11.37	11.74	12.10	12.24	12.43	12.90	2.56
9. STONE&CLAY MINING & QUARRYING	0.61	0.62	0.64	0.67	0.69	0.69	2.56
10. CHEM&FERTILIZER MIN. MINING	0.48	0.49	0.51	0.52	0.52	0.53	1.99
11. NEW CONSTRUCTION	42.84	43.97	45.08	46.73	48.08	48.97	2.71
13. ORONANCE & ACCESSORIES	49.40	51.66	53.69	56.04	57.86	59.53	3.80
14. FOOD & KINDRED PRODUCTS	3.41	3.46	3.48	3.47	3.44	3.42	0.07
16. FABRIC,YARN & THREAO MILLS	2.05	2.11	2.16	2.21	2.22	2.22	1.63
17. MISC. TEXTILE GOOOS	0.81	0.84	0.87	0.90	0.92	0.92	2.71
18. APPAREL	2.50	2.52	2.58	2.62	2.63	2.63	1.04
19. MISC. FABRICATED TEXTILE PROO.	0.61	0.63	0.65	0.66	0.67	0.67	1.86
20. LUMBER & WOOD PRODUCTS	1.17	1.28	1.34	1.41	1.44	1.44	4.30
22. HOUSEHOLO FURNITURE	1.08	1.12	1.16	1.20	1.22	1.24	3.03
23. OTHER FURNITURE & FIXTURES	1.14	1.15	1.19	1.22	1.25	1.28	2.20
24. PAPER & ALLIED PRODUCTS	5.54	5.70	5.76	5.78	5.77	5.76	0.77
25. PAPERBOARD CONTAINERS & BOXES	0.82	0.84	0.86	0.87	0.88	0.89	1.71
26. PRINTING & PUBLISHING	1.60	1.60	1.61	1.62	1.62	1.62	0.32
27. CHEMICALS & PROOUCTS	20.82	21.48	22.09	22.57	22.95	23.32	2.30
28. PLASTICS & SYNTHETIC MATLS.	8.62	8.94	9.27	9.50	9.63	9.67	2.31
29. DRUGS,CLEANING & TOILET PREP.	4.49	4.53	4.60	4.65	4.66	4.67	0.77
30. PAINTS & ALLIED PRODUCTS	0.38	0.40	0.41	0.42	0.43	0.44	3.00
31. PET REFINING & REL. PROD.	7.70	7.76	7.89	8.04	8.13	8.20	1.28
32. RUBBER & MISC. PLASTICS PROO.	8.14	8.42	8.78	9.06	9.30	9.39	2.90
35. GLASS & GLASS PRODUCTS	1.74	1.77	1.80	1.81	1.81	1.79	0.53
36. STONE & CLAY PRODUCTS	4.09	4.16	4.22	4.31	4.32	4.26	0.81
37. PRIMARY FERROUS METALS	8.77	9.12	9.49	9.69	9.80	9.84	2.33
38. NONFERROUS METALS	7.62	7.93	8.28	8.55	8.71	8.86	3.08
39. METAL CONTAINERS	0.67	0.66	0.66	0.67	0.67	0.68	0.33
40. FAB. STRUCTURAL METAL PROOUCTS	13.22	13.28	13.64	14.13	14.46	14.69	2.13
41. SCREW MACHINE PROD.&STAMPINGS	3.50	3.68	3.80	3.87	3.89	3.90	2.18
42. OTHER FAB. METAL PROOUCTS	5.91	6.11	6.39	6.61	6.77	6.94	3.26
43. ENGINES & TURBINES	5.80	6.08	6.40	6.56	6.69	6.80	3.21
44. FARM & GARDEN MACHINERY	2.96	3.12	3.36	3.48	3.60	3.71	4.64
45. CONSTR. & MINING MACHINERY	9.99	10.79	11.58	12.22	12.76	13.12	5.60
46. MATERIALS HANDLING MACH. & EQ.	3.57	3.77	4.07	4.32	4.52	4.68	5.58
47. METALWORKING MACH. & EQ.	11.09	11.83	12.82	13.63	14.33	14.89	6.07
48. SPECIAL INDUSTRY MACHINERY	5.49	5.70	6.08	6.44	6.69	6.93	4.74
49. GENERAL INDUSTRY MACHINERY	11.58	12.05	12.80	13.32	13.73	14.12	4.05
50. MISC. NONELECTRICAL MACH.	2.92	3.02	3.17	3.27	3.32	3.38	2.96
51. OFFICE,COMPUTING & ACCT. MACH.	45.62	48.22	51.02	52.68	54.11	56.00	4.18

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
1. ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
52. SERVICE INDUSTRY MACHINES	3 99	4.21	4 47	4 60	4 66	4 72	3.37
53. ELECTRICAL MACHINERY	13 10	13.42	14 11	14 51	14 75	14 93	2.65
54. HOUSEHOLD APPLIANCES	2 85	2.93	3 01	3 11	3 18	3 22	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	4 54	4.57	4 69	4 81	4 88	4 94	1.70
56. RADIO, TV, & COMMUNICATION EQ.	78 15	81.09	84 75	87 32	89 19	91 74	3.26
57. ELECTRONIC COMPONENTS & ACCESS.	28 34	30.08	32 10	33 93	35 43	36 69	5 30
58. MISC. ELECTRICAL MACH. & EQ.	5 69	5 89	6 12	6 20	6 27	6 32	2.12
59. MOTOR VEHICLES & EQUIPMENT	19 82	20 74	21 47	21 83	22 09	22 24	2 33
60. AIRCRAFT & PARTS	64 46	68 50	71 85	75 62	77 30	78 72	4.08
61. OTHER TRANSPORTATION EQ.	5 68	5 83	6 03	6 15	6 16	6 20	1.78
62. INSTRUMENTS & SUPPLIES	30 71	31 58	33 17	34 80	36 05	36 98	3.79
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	8 65	8 81	9 22	9 66	10 01	10 30	3 54
64. MISC. MANUFACTURING	2 53	2 58	2 68	2 77	2 83	2 87	2.60
65. TRANSPORTATION & WAREHOUSING	7 82	7 97	8 10	8 27	8 29	8 26	1 10
66. COMMUNICATION EXC. RADIO & TV	33 20	34 25	35 89	37 06	38 71	39 86	3 72
67. RADIO & TV BROADCASTING	9 54	10.00	10 43	10 73	10 96	11 18	3 24
68. UTILITIES	31 49	32 06	32 59	33 10	33 65	34 13	1 62
69. WHOLESALE & RETAIL TRADE	50 91	52 53	54 14	55 51	56 58	57 69	2 53
70. FINANCE & INSURANCE	4 99	5 07	5 16	5 29	5 42	5 54	2 10
71. REAL ESTATE & RENTAL	0 60	0 61	0 63	0 64	0 65	0 66	2 00
72. PERSONAL SERVICES EXC. AUTO.	1 76	1 81	1 86	1 92	1 97	2 02	2 74
73. BUSINESS SERVICES	53 15	55 29	57 64	60 34	62 71	64 68	4 01
77. MISC. SERVICES	149 17	152 76	156 77	161 89	167 60	173 83	3 11
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	33 56	34 59	35 81	36 98	37 95	38 85	2 97
82. GOVERNMENT INDUSTRY	192 44	192 95	195 69	199 95	204 22	208 17	1 58
TOTAL, ALL INDUSTRIES	1 166 64	1 202 51	1 244 92	1 285 43	1 319 09	1 350 55	2 97

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
2 AERO-ASTRONAUTIC ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13 ORDNANCE & ACCESSORIES	13 63	15 99	18 03	20 11	21 86	23 33	11 35
42 OTHER FAB METAL PRODUCTS	0 01	0 01	0 01	0 01	0 01	0 01	10 14
43 ENGINES & TURBINES	0 01	0 01	0 01	0 01	0 01	0 01	7 76
56 RADIO, TV, & COMMUNICATION EQ	0 68	0 78	0 86	0 93	0 98	1 01	8 24
57 ELECTRONIC COMPONENTS & ACCESS	0 02	0 02	0 03	0 03	0 03	0 04	11 35
60 AIRCRAFT & PARTS	13 50	15 93	18 26	20 92	23 19	24 64	12 78
62 INSTRUMENTS & SUPPLIES	0 07	0 07	0 08	0 09	0 09	0 10	7 85
65 TRANSPORTATION & WAREHOUSING	0 05	0 05	0 06	0 06	0 06	0 06	4 84
73 BUSINESS SERVICES	0 18	0 20	0 22	0 25	0 27	0 28	9 58
77 MISC SERVICES	0 01	0 01	0 01	0 01	0 01	0 01	3 89
81 SELF-EMPLOYED & UNPAID FAMILY WORKERS	0 20	0 22	0 24	0 26	0 27	0 28	7 02
82 GOVERNMENT INDUSTRY	3 50	3 47	3 57	3 71	3 80	3 87	2 02
TOTAL ALL INDUSTRIES	31 87	36 79	41 40	46 42	50 64	53 67	10 98
TOTAL EMPLOYMENT							
13 ORDNANCE & ACCESSORIES	22 55	23 92	25 18	26 60	27 76	28 85	5 05
42 OTHER FAB METAL PRODUCTS	0 19	0 20	0 21	0 21	0 22	0 22	3 42
43 ENGINES & TURBINES	0 09	0 09	0 09	0 10	0 10	0 10	1 82
56 RADIO, TV, & COMMUNICATION EQ	1 61	1 65	1 70	1 73	1 75	1 78	2 08
57 ELECTRONIC COMPONENTS & ACCESS	0 09	0 10	0 10	0 11	0 11	0 11	3 63
60 AIRCRAFT & PARTS	27 05	29 33	31 35	33 57	34 89	36 08	5 93
62 INSTRUMENTS & SUPPLIES	0 56	0 57	0 59	0 61	0 62	0 63	2 41
65 TRANSPORTATION & WAREHOUSING	1 20	1 23	1 26	1 30	1 31	1 32	1 91
73 BUSINESS SERVICES	3 63	3 78	3 95	4 14	4 30	4 44	4 14
77 MISC SERVICES	1 84	1 86	1 89	1 93	1 98	2 03	1 94
81 SELF-EMPLOYED & UNPAID FAMILY WORKERS	0 45	0 47	0 50	0 52	0 54	0 56	4 58
82 GOVERNMENT INDUSTRY	13 91	14 01	14 13	14 75	15 16	15 53	2 23
TOTAL ALL INDUSTRIES	74 12	78 21	82 16	86 60	89 80	92 72	4 58

NOTE INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMUNITY SURVEY

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
3. CHEMICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.03	0.03	0.04	0.04	0.04	0.04	4.80
11. NEW CONSTRUCTION	0.10	0.12	0.13	0.14	0.15	0.16	8.37
13. ORDNANCE & ACCESSORIES	0.21	0.23	0.25	0.27	0.28	0.29	6.75
24. PAPER & ALLIED PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	6.57
27. CHEMICALS & PRODUCTS	0.55	0.62	0.68	0.75	0.82	0.87	9.86
28. PLASTICS & SYNTHETIC MATLS.	0.10	0.11	0.12	0.13	0.14	0.15	8.70
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.22
31. PET REFINING & REL. PROD.	0.16	0.17	0.18	0.20	0.22	0.23	8.05
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.03	0.03	0.04	0.04	0.04	10.31
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.84
36. STONE & CLAY PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05	8.21
37. PRIMARY FERROUS METALS	0.01	0.01	0.01	0.01	0.01	0.01	7.23
38. NONFERROUS METALS	0.03	0.04	0.04	0.04	0.05	0.05	9.69
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.20
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.34
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.02	7.50
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.30
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.23
56. RADIO, TV, & COMMUNICATION EQ.	0.23	0.26	0.29	0.31	0.33	0.34	8.13
57. ELECTRONIC COMPONENTS & ACCESS.	0.17	0.20	0.22	0.25	0.27	0.28	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.57
60. AIRCRAFT & PARTS	0.32	0.36	0.39	0.43	0.47	0.48	8.59
61. OTHER TRANSPORTATION EQ.	0.06	0.07	0.07	0.07	0.07	0.07	3.41
62. INSTRUMENTS & SUPPLIES	0.07	0.08	0.08	0.09	0.10	0.10	8.17
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.02	0.02	0.03	0.03	0.03	8.50
68. UTILITIES	0.05	0.06	0.06	0.07	0.07	0.07	6.17
69. WHOLESALE & RETAIL TRADE	0.01	0.02	0.02	0.02	0.02	0.02	8.88
73. BUSINESS SERVICES	0.22	0.25	0.28	0.31	0.33	0.35	9.51
77. MISC. SERVICES	0.04	0.04	0.04	0.04	0.04	0.04	3.99
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.04	0.04	0.05	0.05	5.28
82. GOVERNMENT INDUSTRY	0.63	0.62	0.63	0.65	0.66	0.67	1.01
TOTAL, ALL INDUSTRIES	3.22	3.54	3.82	4.14	4.41	4.58	7.26
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.44	0.44	0.45	0.44	0.44	0.44	-0.01
11. NEW CONSTRUCTION	2.76	2.81	2.86	2.95	3.01	3.05	1.96

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
3. CHEMICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
13. ORDNANCE & ACCESSORIES	0.34	0.35	0.35	0.36	0.36	0.36	0.71
24. PAPER & ALLIED PRODUCTS	1.24	1.28	1.29	1.29	1.29	1.29	0.74
27. CHEMICALS & PRODUCTS	11.36	11.84	12.29	12.67	12.99	13.30	3.21
28. PLASTICS & SYNTHETIC MATLS.	4.01	4.16	4.31	4.42	4.48	4.50	2.31
30. PAINTS & ALLIED PRODUCTS	0.17	0.18	0.19	0.20	0.20	0.20	2.99
31. PET REFINING & REL. PROD.	2.89	2.96	3.06	3.17	3.26	3.35	2.98
32. RUBBER & MISC. PLASTICS PROD.	1.01	1.04	1.09	1.12	1.15	1.16	2.88
35. GLASS & GLASS PRODUCTS	0.32	0.32	0.33	0.34	0.34	0.33	1.09
36. STONE & CLAY PRODUCTS	1.09	1.11	1.12	1.15	1.16	1.14	0.99
37. PRIMARY FERROUS METALS	0.11	0.11	0.11	0.11	0.11	0.11	0.90
38. NONFERROUS METALS	0.38	0.39	0.41	0.42	0.43	0.44	3.08
40. FAB. STRUCTURAL METAL PRODUCTS	0.23	0.23	0.24	0.25	0.25	0.25	1.49
42. OTHER FAB. METAL PRODUCTS	0.17	0.17	0.18	0.18	0.19	0.19	2.67
49. GENERAL INDUSTRY MACHINERY	0.24	0.25	0.26	0.27	0.27	0.28	2.61
51. OFFICE, COMPUTING & ACCT. MACH.	0.15	0.16	0.16	0.17	0.17	0.17	2.71
55. ELECTRIC LIGHTING & WIRING EQ.	0.16	0.16	0.16	0.16	0.17	0.17	1.68
56. RADIO, TV, & COMMUNICATION EQ.	0.54	0.55	0.57	0.58	0.58	0.59	1.98
57. ELECTRONIC COMPONENTS & ACCESS.	0.75	0.79	0.82	0.86	0.88	0.90	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.24	0.25	0.26	0.26	0.26	0.27	2.12
60. AIRCRAFT & PARTS	0.63	0.66	0.68	0.70	0.70	0.70	2.00
61. OTHER TRANSPORTATION EQ.	0.21	0.22	0.23	0.23	0.23	0.24	2.00
62. INSTRUMENTS & SUPPLIES	0.58	0.59	0.61	0.63	0.65	0.66	2.71
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.46	0.46	0.48	0.51	0.52	0.54	3.14
68. UTILITIES	2.50	2.51	2.52	2.52	2.53	2.53	0.21
69. WHOLESALE & RETAIL TRADE	2.27	2.33	2.38	2.43	2.46	2.49	1.89
73. BUSINESS SERVICES	4.53	4.72	4.92	5.16	5.36	5.53	4.07
77. MISC. SERVICES	5.45	5.52	5.60	5.72	5.87	6.03	2.04
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.51	0.52	0.53	0.55	0.56	0.57	2.37
82. GOVERNMENT INDUSTRY	2.82	2.81	2.84	2.89	2.94	2.98	1.07
TOTAL, ALL INDUSTRIES	51.55	52.94	54.43	55.86	56.99	57.95	2.37

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
4. CIVIL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.04	0.04	0.04	0.04	0.04	0.04	4.68
11. NEW CONSTRUCTION	0.60	0.69	0.75	0.83	0.91	0.96	9.86
13. ORDNANCE & ACCESSORIES	0.12	0.14	0.15	0.16	0.17	0.18	7.33
27. CHEMICALS & PRODUCTS	0.03	0.04	0.04	0.04	0.05	0.05	7.52
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.73
31. PET REFINING & REL. PROD.	0.04	0.04	0.04	0.05	0.05	0.05	5.18
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	8.15
37. PRIMARY FERROUS METALS	0.04	0.04	0.04	0.05	0.05	0.05	7.19
38. NONFERROUS METALS	0.01	0.01	0.01	0.01	0.02	0.02	10.15
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.05	0.05	0.06	0.06	0.06	7.10
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	10.13
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.12
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.53
56. RADIO, TV, & COMMUNICATION EQ.	0.25	0.28	0.31	0.34	0.36	0.37	8.24
57. ELECTRONIC COMPONENTS & ACCESS.	0.02	0.03	0.03	0.03	0.04	0.04	11.38
60. AIRCRAFT & PARTS	0.14	0.16	0.18	0.20	0.21	0.22	8.61
61. OTHER TRANSPORTATION EQ.	0.09	0.10	0.10	0.10	0.10	0.11	3.41
62. INSTRUMENTS & SUPPLIES	0.01	0.01	0.01	0.02	0.02	0.02	8.18
65. TRANSPORTATION & WAREHOUSING	0.08	0.08	0.08	0.09	0.09	0.09	2.52
66. COMMUNICATION EXC. RADIO & TV	0.02	0.02	0.02	0.03	0.03	0.03	5.42
68. UTILITIES	0.05	0.05	0.06	0.06	0.07	0.07	6.38
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.02	0.02	0.02	0.02	9.69
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	8.36
73. BUSINESS SERVICES	0.13	0.14	0.15	0.17	0.18	0.18	6.84
77. MISC. SERVICES	0.37	0.39	0.41	0.44	0.46	0.48	4.98
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.71	0.71	0.74	0.77	0.79	0.81	2.72
82. GOVERNMENT INDUSTRY	8.45	8.40	8.68	9.04	9.31	9.49	2.34
TOTAL, ALL INDUSTRIES	11.39	11.59	12.09	12.71	13.20	13.51	3.47
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.48	0.48	0.48	0.48	0.47	0.48	-0.12
11. NEW CONSTRUCTION	15.96	16.49	17.03	17.76	18.38	18.83	3.37
13. ORDNANCE & ACCESSORIES	0.20	0.21	0.21	0.21	0.22	0.22	1.25
27. CHEMICALS & PRODUCTS	0.69	0.70	0.71	0.72	0.72	0.73	1.00
28. PLASTICS & SYNTHETIC MATLS.	0.29	0.30	0.31	0.32	0.33	0.33	2.33

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
CIVIL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
31. PET REFINING & REL. PROO.	0.72	0.72	0.72	0.73	0.73	0.73	0.25
36. STONE & CLAY PRODUCTS	0.33	0.34	0.34	0.35	0.35	0.35	0.92
37. PRIMARY FERROUS METALS	0.49	0.50	0.52	0.52	0.52	0.51	0.86
38. NONFERROUS METALS	0.12	0.13	0.13	0.14	0.14	0.14	3.51
40. FAB. STRUCTURAL METAL PRODUCTS	1.02	1.01	1.03	1.06	1.08	1.09	1.39
42. OTHER FAB. METAL PRODUCTS	0.28	0.29	0.31	0.32	0.32	0.33	3.40
45. CONSTR. & MINING MACHINERY	0.58	0.62	0.65	0.67	0.69	0.70	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.21	0.22	0.23	0.24	0.24	0.25	3.63
49. GENERAL INDUSTRY MACHINERY	0.23	0.24	0.25	0.26	0.26	0.27	2.64
56. RADIO, TV, & COMMUNICATION EQ.	0.58	0.60	0.62	0.63	0.64	0.65	2.09
57. ELECTRONIC COMPONENTS & ACCESS.	0.10	0.10	0.11	0.11	0.12	0.12	3.66
60. AIRCRAFT & PARTS	0.29	0.30	0.31	0.32	0.32	0.32	2.01
61. OTHER TRANSPORTATION EQ.	0.31	0.32	0.34	0.34	0.34	0.35	2.00
62. INSTRUMENTS & SUPPLIES	0.10	0.10	0.10	0.11	0.11	0.11	2.72
65. TRANSPORTATION & WAREHOUSING	1.85	1.86	1.87	1.88	1.86	1.82	-0.35
66. COMMUNICATION EXC. RADIO & TV	0.84	0.85	0.87	0.88	0.91	0.92	1.71
68. UTILITIES	2.33	2.34	2.35	2.36	2.37	2.38	0.41
69. WHOLESALE & RETAIL TRADE	2.00	2.07	2.14	2.19	2.24	2.28	2.65
71. REAL ESTATE & RENTAL	0.25	0.26	0.26	0.27	0.28	0.28	1.99
73. BUSINESS SERVICES	2.67	2.71	2.75	2.81	2.86	2.88	1.54
77. MISC. SERVICES	57.72	59.05	60.54	62.46	64.61	66.95	3.01
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	6.35	6.45	6.55	6.77	6.95	7.13	2.37
82. GOVERNMENT INDUSTRY	60.88	61.20	62.20	63.58	64.97	66.50	1.78
TOTAL, ALL INDUSTRIES	161.18	163.85	167.43	172.01	176.57	181.20	2.37

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
5. ELECTRICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INOUCED EMPLOYMENT							
5. IRON ORE MINING	0.01	0.01	0.01	0.01	0.01	0.01	8.56
7. COAL MINING	0.01	0.01	0.01	0.01	0.02	0.02	9.21
8. CRUDE PETROLEUM & N. GAS	0.07	0.07	0.08	0.08	0.08	0.08	4.25
11. NEW CONSTRUCTION	0.25	0.29	0.31	0.34	0.36	0.38	8.62
13. ORONANCE & ACCESSORIES	4.17	4.83	5.39	5.94	6.40	6.77	10.14
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	6.49
27. CHEMICALS & PRODUCTS	0.08	0.08	0.09	0.10	0.10	0.11	7.81
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.02	0.02	0.02	0.02	8.71
31. PET REFINING & REL. PROO.	0.02	0.03	0.03	0.03	0.03	0.03	5.26
32. RUBBER & MISC. PLASTICS PROO.	0.01	0.01	0.02	0.02	0.02	0.02	10.08
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.20
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.06	0.06	0.06	7.20
38. NONFERROUS METALS	0.12	0.14	0.16	0.17	0.19	0.20	9.95
40. FAB. STRUCTURAL METAL PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	7.57
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	10.08
43. ENGINES & TURBINES	0.04	0.04	0.05	0.05	0.05	0.05	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.02	0.03	0.03	9.13
47. METALWORKING MACH. & EQ.	0.08	0.09	0.10	0.11	0.11	0.12	9.36
48. SPECIAL INOUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.06
49. GENERAL INDUSTRY MACHINERY	0.05	0.06	0.06	0.07	0.07	0.08	7.51
50. MISC. NONELECTRICAL MACH.	0.03	0.03	0.03	0.04	0.04	0.04	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	1.11	1.29	1.42	1.55	1.64	1.70	8.98
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.01	13.37
53. ELECTRICAL MACHINERY	0.36	0.41	0.45	0.50	0.54	0.57	9.88
55. ELECTRIC LIGHTING & WIRING EQ.	0.07	0.08	0.08	0.09	0.10	0.10	8.25
56. RADIO, TV, & COMMUNICATION EQ.	21.87	25.58	28.57	31.47	33.62	34.87	9.78
57. ELECTRONIC COMPONENTS & ACCESS.	4.31	5.23	6.00	6.82	7.56	8.05	13.28
58. MISC. ELECTRICAL MACH. & EQ.	0.04	0.05	0.06	0.06	0.07	0.07	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.02	0.02	0.02	17.16
60. AIRCRAFT & PARTS	2.18	2.47	2.72	3.00	3.21	3.30	8.59
61. OTHER TRANSPORTATION EQ.	0.19	0.20	0.21	0.21	0.22	0.22	3.09
62. INSTRUMENTS & SUPPLIES	2.02	2.32	2.58	2.87	3.11	3.28	10.22
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.15	0.17	0.19	0.21	0.23	0.24	9.35
65. TRANSPORTATION & WAREHOUSING	0.04	0.04	0.04	0.04	0.05	0.05	4.83
66. COMMUNICATION EXC. RADIO & TV	0.54	0.59	0.64	0.71	0.78	0.81	8.69
67. RADIO & TV BROADCASTING	0.18	0.20	0.23	0.25	0.27	0.29	9.86

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
5. ELECTRICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	0.34	0.39	0.43	0.47	0.51	0.53	9.11
69. WHOLESALE & RETAIL TRADE	0.08	0.09	0.10	0.11	0.12	0.13	9.75
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.02	0.02	0.02	0.02	0.02	9.67
73. BUSINESS SERVICES	1.07	1.23	1.39	1.57	1.72	1.82	11.26
77. MISC. SERVICES	0.20	0.20	0.22	0.23	0.25	0.26	5.51
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.77	0.82	0.87	0.92	0.96	0.98	4.85
82. GOVERNMENT INDUSTRY	16.04	15.72	16.02	16.45	16.72	16.83	0.96
TOTAL, ALL INDUSTRIES	56.73	63.04	68.80	74.83	79.48	82.34	7.74
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.14	0.15	0.16	0.16	0.16	0.15	2.36
7. COAL MINING	0.39	0.41	0.43	0.44	0.45	0.46	3.50
8. CRUDE PETROLEUM & N. GAS	0.94	0.93	0.93	0.92	0.90	0.91	-0.54
11. NEW CONSTRUCTION	6.72	6.86	7.00	7.22	7.39	7.49	2.20
13. ORONANCE & ACCESSORIES	6.91	7.23	7.52	7.86	8.12	8.36	3.91
24. PAPER & ALLIED PRODUCTS	0.61	0.63	0.63	0.63	0.63	0.63	0.66
27. CHEMICALS & PRODUCTS	1.57	1.60	1.63	1.64	1.66	1.67	1.28
28. PLASTICS & SYNTHETIC MATLS.	0.68	0.71	0.73	0.75	0.76	0.76	2.32
31. PET REFINING & REL. PROD.	0.46	0.46	0.46	0.46	0.47	0.47	0.33
32. RUBBER & MISC. PLASTICS PROO.	0.49	0.50	0.52	0.54	0.55	0.56	2.67
36. STONE & CLAY PRODUCTS	0.22	0.22	0.22	0.22	0.22	0.22	0.04
37. PRIMARY FERROUS METALS	0.63	0.64	0.66	0.66	0.66	0.66	0.87
38. NONFERROUS METALS	1.45	1.52	1.59	1.64	1.68	1.71	3.32
40. FAB. STRUCTURAL METAL PRODUCTS	0.45	0.45	0.46	0.47	0.48	0.49	1.84
42. OTHER FAB. METAL PRODUCTS	0.37	0.39	0.41	0.42	0.43	0.44	3.36
43. ENGINES & TURBINES	0.44	0.45	0.47	0.48	0.48	0.48	1.77
45. CONSTR. & MINING MACHINERY	0.86	0.91	0.95	0.99	1.01	1.02	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.31	0.32	0.34	0.35	0.36	0.37	3.63
47. METALWORKING MACH. & EQ.	1.48	1.54	1.63	1.69	1.74	1.77	3.76
48. SPECIAL INDUSTRY MACHINERY	0.88	0.90	0.94	0.99	1.01	1.03	3.22
49. GENERAL INDUSTRY MACHINERY	1.20	1.23	1.29	1.33	1.35	1.37	2.62
50. MISC. NONELECTRICAL MACH.	0.24	0.25	0.26	0.27	0.27	0.27	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	29.39	31.11	32.96	34.07	35.04	36.30	4.31
52. SERVICE INDUSTRY MACHINES	0.41	0.42	0.44	0.45	0.45	0.45	2.10
53. ELECTRICAL MACHINERY	7.17	7.36	7.74	7.98	8.12	8.23	2.77
55. ELECTRIC LIGHTING & WIRING EQ.	1.46	1.47	1.51	1.55	1.57	1.59	1.70
56. RADIO, TV, & COMMUNICATION EQ.	51.79	53.90	56.49	58.36	59.76	61.61	3.53
57. ELECTRONIC COMPONENTS & ACCESS.	19.69	20.92	22.36	23.66	24.74	25.64	5.43

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
5. ELECTRICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
58. MISC. ELECTRICAL MACH. & EQ.	1.62	1.68	1.75	1.77	1.79	1.80	2.12
59. MOTOR VEHICLES & EQUIPMENT	0.52	0.54	0.56	0.57	0.58	0.58	2.24
60. AIRCRAFT & PARTS	4.37	4.55	4.67	4.82	4.83	4.83	1.99
61. OTHER TRANSPORTATION EQ.	0.67	0.68	0.71	0.72	0.72	0.72	1.68
62. INSTRUMENTS & SUPPLIES	17.32	17.97	19.04	20.14	21.04	21.74	4.66
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	3.56	3.64	3.83	4.03	4.19	4.33	3.95
65. TRANSPORTATION & WAREHOUSING	0.87	0.89	0.91	0.94	0.95	0.95	1.90
66. COMMUNICATION EXC. RADIO & TV	21.60	22.57	23.92	24.97	26.35	27.39	4.87
67. RADIO & TV BROADCASTING	9.02	9.46	9.88	10.17	10.39	10.62	3.32
68. UTILITIES	16.01	16.54	17.05	17.55	18.07	18.55	2.99
69. WHOLESALE & RETAIL TRADE	13.20	13.65	14.09	14.47	14.77	15.08	2.70
72. PERSONAL SERVICES EXC. AUTO.	0.73	0.75	0.77	0.80	0.82	0.85	3.06
73. BUSINESS SERVICES	22.00	23.34	24.77	26.35	27.80	29.07	5.73
77. MISC. SERVICES	30.32	31.19	32.14	33.33	34.63	36.05	3.52
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.28	4.43	4.62	4.79	4.94	5.08	3.51
82. GOVERNMENT INDUSTRY	42.85	42.76	43.17	43.95	44.72	45.35	1.14
TOTAL, ALL INDUSTRIES	329.40	341.31	355.89	368.89	380.40	391.48	3.51

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
6. INDUSTRIAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.02	0.02	0.02	0.02	0.03	0.03	10.91
7. COAL MINING	0.03	0.04	0.04	0.05	0.05	0.06	11.38
8. CRUDE PETROLEUM & N. GAS	0.06	0.06	0.07	0.07	0.08	0.08	6.12
11. NEW CONSTRUCTION	0.12	0.13	0.15	0.16	0.18	0.19	10.13
13. ORDNANCE & ACCESSORIES	1.58	1.81	1.99	2.17	2.31	2.42	8.85
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.02	0.02	0.02	0.02	4.74
18. APPAREL	0.01	0.01	0.01	0.01	0.01	0.01	6.15
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.68
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.24
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.62
24. PAPER & ALLIED PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	6.79
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.78
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.01	0.01	0.01	5.83
27. CHEMICALS & PRODUCTS	0.08	0.09	0.09	0.10	0.11	0.11	7.63
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.02	0.03	0.03	0.03	8.72
31. PET REFINING & REL. PROD.	0.03	0.03	0.04	0.04	0.04	0.04	5.24
32. RUBBER & MISC. PLASTICS PROD.	0.05	0.05	0.06	0.06	0.07	0.08	10.26
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.34
36. STONE & CLAY PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.04	8.07
37. PRIMARY FERROUS METALS	0.16	0.18	0.20	0.22	0.24	0.25	9.76
38. NONFERROUS METALS	0.11	0.12	0.14	0.15	0.16	0.17	9.46
40. FAB. STRUCTURAL METAL PRODUCTS	0.08	0.09	0.10	0.11	0.12	0.13	9.80
41. SCREW MACHINE PROD. & STAMPINGS	0.06	0.06	0.07	0.07	0.08	0.08	7.71
42. OTHER FAB. METAL PRODUCTS	0.05	0.05	0.06	0.06	0.07	0.07	10.03
43. ENGINES & TURBINES	0.06	0.07	0.08	0.08	0.09	0.09	7.72
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.03	0.03	0.03	0.03	10.18
46. MATERIALS HANDLING MACH. & EQ.	0.04	0.04	0.05	0.05	0.06	0.06	12.11
47. METALWORKING MACH. & EQ.	0.10	0.11	0.13	0.15	0.16	0.17	12.65
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.06
49. GENERAL INDUSTRY MACHINERY	0.09	0.10	0.11	0.12	0.13	0.13	8.98
50. MISC. NONELECTRICAL MACH.	0.12	0.14	0.15	0.17	0.19	0.19	9.60
51. OFFICE, COMPUTING & ACCT. MACH.	0.22	0.25	0.28	0.30	0.32	0.33	8.76
52. SERVICE INDUSTRY MACHINES	0.01	0.02	0.02	0.02	0.02	0.03	13.37
53. ELECTRICAL MACHINERY	0.09	0.11	0.12	0.13	0.14	0.15	10.62
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.06	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.65	1.92	2.14	2.36	2.51	2.60	9.54
57. ELECTRONIC COMPONENTS & ACCESS.	0.55	0.67	0.77	0.88	0.97	1.03	13.29

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
6. INDUSTRIAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.09	0.10	0.12	0.14	0.16	0.19	17.65
60. AIRCRAFT & PARTS	2.42	2.78	3.10	3.46	3.74	3.88	9.87
61. OTHER TRANSPORTATION EQ.	0.19	0.20	0.20	0.21	0.21	0.22	3.22
62. INSTRUMENTS & SUPPLIES	0.26	0.29	0.32	0.35	0.37	0.38	8.25
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.02	0.02	0.02	0.03	0.03	8.52
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.44
65. TRANSPORTATION & WAREHOUSING	0.04	0.04	0.05	0.05	0.05	0.05	4.50
66. COMMUNICATION EXC. RADIO & TV	0.07	0.07	0.07	0.08	0.08	0.09	5.42
68. UTILITIES	0.03	0.04	0.04	0.04	0.04	0.05	5.95
69. WHOLESALE & RETAIL TRADE	0.05	0.05	0.06	0.07	0.07	0.08	9.47
70. FINANCE & INSURANCE	0.03	0.03	0.04	0.04	0.04	0.05	8.92
73. BUSINESS SERVICES	0.18	0.20	0.22	0.24	0.25	0.26	7.42
77. MISC. SERVICES	0.04	0.04	0.04	0.05	0.05	0.05	4.26
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.64	0.69	0.73	0.78	0.81	0.83	5.35
82. GOVERNMENT INDUSTRY	1.83	1.79	1.83	1.88	1.92	1.93	1.13
TOTAL, ALL INDUSTRIES	11.51	12.85	14.04	15.34	16.36	17.00	8.12
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.28	0.30	0.31	0.31	0.31	0.31	2.33
7. COAL MINING	1.17	1.26	1.34	1.40	1.48	1.54	5.56
8. CRUDE PETROLEUM & N. GAS	0.79	0.81	0.82	0.82	0.82	0.84	1.25
11. NEW CONSTRUCTION	3.12	3.24	3.35	3.51	3.64	3.73	3.62
13. ORDNANCE & ACCESSORIES	2.62	2.71	2.78	2.87	2.94	2.99	2.70
16. FABRIC, YARN & THREAD MILLS	1.09	1.12	1.15	1.16	1.17	1.17	1.36
18. APPAREL	1.92	1.94	1.99	2.03	2.03	2.03	1.11
19. MISC. FABRICATED TEXTILE PROD.	0.34	0.35	0.35	0.36	0.37	0.37	1.85
20. LUMBER & WOOD PRODUCTS	0.40	0.44	0.46	0.48	0.49	0.49	4.36
23. OTHER FURNITURE & FIXTURES	0.60	0.61	0.63	0.65	0.66	0.67	2.20
24. PAPER & ALLIED PRODUCTS	0.90	0.93	0.94	0.95	0.95	0.95	0.95
25. PAPERBOARD CONTAINERS & BOXES	0.34	0.35	0.36	0.37	0.37	0.37	1.71
26. PRINTING & PUBLISHING	0.56	0.56	0.57	0.57	0.57	0.57	0.23
27. CHEMICALS & PRODUCTS	1.65	1.68	1.71	1.72	1.73	1.74	1.11
28. PLASTICS & SYNTHETIC MATLS.	0.82	0.85	0.88	0.90	0.91	0.91	2.32
31. PET REFINING & REL. PRDD.	0.60	0.60	0.60	0.61	0.61	0.61	0.30
32. RUBBER & MISC. PLASTICS PROD.	1.69	1.75	1.82	1.88	1.93	1.95	2.83
35. GLASS & GLASS PRODUCTS	0.33	0.33	0.34	0.34	0.34	0.34	0.63
36. STONE & CLAY PRODUCTS	0.74	0.75	0.77	0.78	0.78	0.77	0.85

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DEFENSE ECONOMIC IMPACT/MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
6. INDUSTRIAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
37. PRIMARY FERROUS METALS	2.20	2.32	2.43	2.51	2.56	2.59	3.27
38. NONFERROUS METALS	1.28	1.33	1.39	1.43	1.45	1.47	2.86
40. FAB. STRUCTURAL METAL PRODUCTS	1.79	1.84	1.92	2.03	2.11	2.17	3.95
41. SCREW MACHINE PROD.&STAMPINGS	0.90	0.94	0.97	0.99	1.00	1.00	2.18
42. OTHER FAB. METAL PRODUCTS	1.00	1.04	1.08	1.12	1.15	1.18	3.31
43. ENGINES & TURBINES	0.76	0.79	0.82	0.83	0.83	0.83	1.78
45. CONSTR. & MINING MACHINERY	1.74	1.89	2.05	2.18	2.30	2.38	6.48
46. MATERIALS HANDLING MACH. & EQ.	0.62	0.66	0.72	0.77	0.81	0.85	6.46
47. METALWORKING MACH. & EQ.	1.86	2.00	2.19	2.35	2.48	2.60	6.88
48. SPECIAL INDUSTRY MACHINERY	0.82	0.84	0.88	0.92	0.94	0.96	3.22
49. GENERAL INDUSTRY MACHINERY	1.98	2.06	2.19	2.28	2.34	2.41	4.02
50. MISC. NONELECTRICAL MACH.	1.07	1.12	1.20	1.25	1.28	1.32	4.19
51. OFFICE, COMPUTING & ACCT. MACH.	5.77	6.09	6.44	6.65	6.82	7.06	4.10
52. SERVICE INDUSTRY MACHINES	0.82	0.85	0.89	0.90	0.91	0.91	2.10
53. ELECTRICAL MACHINERY	1.85	1.91	2.03	2.10	2.15	2.20	3.47
55. ELECTRIC LIGHTING & WIRING EQ.	0.89	0.90	0.92	0.94	0.96	0.97	1.71
56. RADIO, TV, & COMMUNICATION EQ.	3.90	4.05	4.24	4.37	4.46	4.59	3.31
57. ELECTRONIC COMPONENTS & ACCESS.	2.53	2.69	2.87	3.04	3.18	3.30	5.44
58. MISC. ELECTRICAL MACH. & EQ.	0.96	1.00	1.04	1.05	1.06	1.07	2.13
59. MOTOR VEHICLES & EQUIPMENT	4.40	4.62	4.80	4.90	4.97	5.02	2.67
60. AIRCRAFT & PARTS	4.86	5.11	5.32	5.55	5.62	5.68	3.19
61. OTHER TRANSPORTATION EQ.	0.65	0.66	0.69	0.70	0.70	0.71	1.81
62. INSTRUMENTS & SUPPLIES	2.22	2.26	2.34	2.44	2.50	2.54	2.78
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.43	0.44	0.46	0.46	0.49	0.51	3.16
64. MISC. MANUFACTURING	0.96	0.98	1.01	1.05	1.07	1.08	2.39
65. TRANSPORTATION & WAREHOUSING	0.97	1.00	1.02	1.05	1.05	1.05	1.58
66. COMMUNICATION EXC. RADIO & TV	2.66	2.69	2.76	2.79	2.86	2.90	1.71
68. UTILITIES	1.58	1.58	1.58	1.58	1.58	1.58	0.01
69. WHOLESALE & RETAIL TRADE	7.83	8.07	8.31	8.51	8.67	8.83	2.43
70. FINANCE & INSURANCE	3.57	3.61	3.67	3.75	3.83	3.91	1.86
73. BUSINESS SERVICES	3.78	3.85	3.94	4.05	4.13	4.19	2.09
77. MISC. SERVICES	6.19	6.28	6.39	6.55	6.73	6.93	2.30
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	5.62	5.80	6.01	6.19	6.32	6.43	2.74
82. GOVERNMENT INDUSTRY	5.91	5.89	5.94	6.03	6.12	6.21	0.97
TOTAL, ALL INDUSTRIES	109.37	112.87	116.93	120.36	122.96	125.22	2.74

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
7. MECHANICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	11.14
8. CRUDE PETROLEUM & N. GAS	0.03	0.04	0.04	0.04	0.04	0.04	4.54
11. NEW CONSTRUCTION	0.43	0.49	0.53	0.58	0.63	0.66	8.79
13. ORONANCE & ACCESSORIES	3.16	3.61	3.97	4.33	4.60	4.82	8.77
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.63
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.92
24. PAPER & ALLIED PRODUCTS	0.04	0.04	0.05	0.05	0.05	0.05	6.52
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.77
27. CHEMICALS & PRODUCTS	0.19	0.21	0.22	0.24	0.26	0.27	7.69
28. PLASTICS & SYNTHETIC MATLS.	0.05	0.05	0.06	0.06	0.07	0.07	8.70
31. PET REFINING & REL. PROD.	0.07	0.08	0.08	0.09	0.09	0.10	5.23
32. RUBBER & MISC. PLASTICS PROD.	0.08	0.10	0.11	0.12	0.13	0.14	10.25
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	8.92
36. STONE & CLAY PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	8.08
37. PRIMARY FERROUS METALS	0.12	0.13	0.14	0.15	0.16	0.17	7.65
38. NONFERROUS METALS	0.18	0.20	0.23	0.25	0.27	0.28	9.72
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.31	0.35	0.38	0.41	0.43	0.45	7.64
41. SCREW MACHINE PROD. & STAMPINGS	0.09	0.10	0.11	0.12	0.13	0.14	7.72
42. OTHER FAB. METAL PRODUCTS	0.14	0.16	0.18	0.20	0.21	0.23	9.94
43. ENGINES & TURBINES	0.26	0.30	0.34	0.37	0.40	0.43	10.90
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	11.89
45. CONSTR. & MINING MACHINERY	0.06	0.07	0.08	0.08	0.09	0.10	10.19
46. MATERIALS HANDLING MACH. & EQ.	0.10	0.12	0.14	0.15	0.17	0.18	12.12
47. METALWORKING MACH. & EQ.	0.33	0.39	0.44	0.50	0.55	0.59	12.57
48. SPECIAL INDUSTRY MACHINERY	0.02	0.02	0.03	0.03	0.04	0.04	15.22
49. GENERAL INDUSTRY MACHINERY	0.25	0.29	0.32	0.35	0.38	0.41	10.51
50. MISC. NONELECTRICAL MACH.	0.15	0.17	0.18	0.20	0.21	0.22	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.15	0.17	0.20	0.22	0.23	0.24	10.41
52. SERVICE INDUSTRY MACHINES	0.03	0.03	0.03	0.04	0.05	0.06	17.23
53. ELECTRICAL MACHINERY	0.12	0.13	0.14	0.16	0.17	0.18	9.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.05	0.06	0.06	0.07	0.07	0.07	8.25
56. RADIO, TV, & COMMUNICATION EQ.	3.04	3.60	4.07	4.54	4.90	5.13	11.04
57. ELECTRONIC COMPONENTS & ACCESS.	0.52	0.64	0.74	0.85	0.95	1.02	14.46
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.56
59. MOTOR VEHICLES & EQUIPMENT	0.09	0.10	0.12	0.14	0.16	0.19	17.14
60. AIRCRAFT & PARTS	4.85	5.61	6.31	7.11	7.76	8.13	10.90

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
7. MECHANICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
61. OTHER TRANSPORTATION EQ.	0.45	0.48	0.49	0.50	0.52	0.53	3.25
62. INSTRUMENTS & SUPPLIES	0.53	0.60	0.66	0.72	0.76	0.79	8.10
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	0.09	0.10	0.11	0.12	0.13	0.13	8.61
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	7.18
65. TRANSPORTATION & WAREHOUSING	0.09	0.09	0.10	0.10	0.11	0.11	4.38
66. COMMUNICATION EXC. RADIO & TV	0.04	0.05	0.05	0.05	0.06	0.06	5.38
68. UTILITIES	0.11	0.12	0.13	0.14	0.15	0.15	6.05
69. WHOLESALE & RETAIL TRADE	0.07	0.08	0.08	0.09	0.10	0.10	9.55
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.02	0.02	9.35
73. BUSINESS SERVICES	0.44	0.49	0.53	0.57	0.60	0.62	6.84
77. MISC. SERVICES	0.20	0.21	0.22	0.24	0.26	0.27	5.86
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.56	0.60	0.64	0.67	0.70	0.71	4.88
82. GOVERNMENT INDUSTRY	7.40	7.25	7.39	7.59	7.72	7.77	0.98
TOTAL. ALL INDUSTRIES	25.09	27.54	29.90	32.51	34.59	35.93	7.45

TOTAL EMPLOYMENT

6. NONFERROUS METAL MINING	0.14	0.15	0.15	0.16	0.16	0.16	2.55
8. CRUDE PETROLEUM & N. GAS	0.47	0.47	0.47	0.47	0.46	0.47	-0.26
11. NEW CONSTRUCTION	11.52	11.77	12.03	12.42	12.74	12.93	2.35
13. ORNANCE & ACCESSORIES	5.23	5.40	5.55	5.72	5.85	5.95	2.61
16. FABRIC.YARN & THREAD MILLS	0.52	0.54	0.55	0.57	0.58	0.58	2.21
20. LUMBER & WOOD PRODUCTS	0.31	0.34	0.35	0.37	0.38	0.38	4.05
24. PAPER & ALLIED PRODUCTS	2.08	2.14	2.16	2.16	2.16	2.15	0.69
25. PAPERBOARD CONTAINERS & BOXES	0.27	0.28	0.29	0.29	0.29	0.30	1.71
27. CHEMICALS & PRODUCTS	3.92	4.00	4.06	4.11	4.13	4.16	1.17
28. PLASTICS & SYNTHETIC MATLS.	1.88	1.95	2.02	2.07	2.10	2.11	2.31
31. PET REFINING & REL. PROO.	1.37	1.37	1.38	1.39	1.39	1.39	0.29
32. RUBBER & MISC. PLASTICS PROO.	3.10	3.20	3.33	3.44	3.53	3.56	2.83
35. GLASS & GLASS PRODUCTS	0.57	0.58	0.59	0.59	0.58	0.58	0.25
36. STONE & CLAY PRODUCTS	0.90	0.92	0.93	0.95	0.95	0.94	0.86
37. PRIMARY FERROUS METALS	1.62	1.67	1.72	1.74	1.74	1.73	1.29
38. NONFERROUS METALS	2.10	2.19	2.28	2.36	2.41	2.45	3.10
39. METAL CONTAINERS	0.45	0.44	0.44	0.45	0.45	0.46	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	7.04	7.06	7.23	7.48	7.64	7.74	1.90
41. SCREW MACHINE PROO.&STAMPINGS	1.52	1.60	1.65	1.68	1.69	1.70	2.19
42. OTHER FAB. METAL PRODUCTS	3.07	3.17	3.32	3.43	3.51	3.60	3.23
43. ENGINES & TURBINES	3.10	3.31	3.54	3.68	3.80	3.92	4.78
44. FARM & GARDEN MACHINERY	1.91	2.04	2.23	2.34	2.44	2.54	5.85



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
7. MECHANICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TD 87
45. CONSTR. & MINING MACHINERY	5.02	5.48	5.94	6.32	6.65	6.88	6.49
46. MATERIALS HANDLING MACH. & EQ.	1.80	1.91	2.09	2.23	2.35	2.46	6.47
47. METALWORKING MACH. & EQ.	6.36	6.84	7.47	8.00	8.46	8.84	6.81
48. SPECIAL INDUSTRY MACHINERY	2.80	2.95	3.19	3.43	3.61	3.78	6.13
49. GENERAL INDUSTRY MACHINERY	5.63	5.95	6.42	6.77	7.06	7.35	5.48
50. MISC. NONELECTRICAL MACH.	1.33	1.37	1.43	1.46	1.47	1.49	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	3.91	4.21	4.52	4.74	4.93	5.16	5.68
52. SERVICE INDUSTRY MACHINES	1.39	1.51	1.64	1.72	1.78	1.83	5.59
53. ELECTRICAL MACHINERY	2.32	2.36	2.47	2.52	2.55	2.57	2.11
55. ELECTRIC LIGHTING & WIRING EQ.	1.04	1.05	1.08	1.10	1.12	1.13	1.70
56. RADIO, TV, & COMMUNICATION EQ.	7.20	7.59	8.05	8.41	8.71	9.07	4.72
57. ELECTRONIC COMPONENTS & ACCESS.	2.38	2.56	2.76	2.95	3.12	3.26	6.52
58. MISC. ELECTRICAL MACH. & EQ.	0.95	0.98	1.02	1.04	1.05	1.06	2.11
59. MOTOR VEHICLES & EQUIPMENT	4.40	4.60	4.75	4.83	4.88	4.91	2.23
60. AIRCRAFT & PARTS	9.71	10.33	10.84	11.42	11.68	11.90	4.16
61. OTHER TRANSPORTATION EQ.	1.57	1.61	1.67	1.70	1.71	1.72	1.84
62. INSTRUMENTS & SUPPLIES	4.59	4.67	4.85	5.03	5.15	5.23	2.64
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.05	2.08	2.17	2.27	2.35	2.41	3.25
64. MISC. MANUFACTURING	0.82	0.84	0.87	0.91	0.93	0.95	3.10
65. TRANSPORTATION & WAREHOUSING	2.10	2.15	2.19	2.25	2.26	2.26	1.46
66. COMMUNICATION EXC. RADIO & TV	1.76	1.78	1.83	1.85	1.90	1.92	1.67
68. UTILITIES	5.20	5.20	5.21	5.21	5.22	5.22	0.10
69. WHOLESALE & RETAIL TRADE	10.83	11.18	11.52	11.81	12.03	12.27	2.52
72. PERSONAL SERVICES EXC. AUTO.	0.57	0.58	0.60	0.61	0.63	0.65	2.76
73. BUSINESS SERVICES	9.13	9.25	9.40	9.61	9.76	9.85	1.54
77. MISC. SERVICES	31.08	32.10	33.20	34.53	36.00	37.58	3.87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.29	4.43	4.60	4.76	4.89	5.00	3.15
82. GOVERNMENT INDUSTRY	18.04	18.01	18.19	18.52	18.84	19.11	1.15
TOTAL, ALL INDUSTRIES	207.28	214.17	222.40	230.14	236.40	242.00	3.15

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
8. METALLURGICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.02	0.02	0.02	0.02	0.03	0.03	10.94
8. CRUDE PETROLEUM & N. GAS	0.01	0.01	0.01	0.01	0.01	0.01	4.56
11. NEW CONSTRUCTION	0.01	0.02	0.02	0.02	0.02	0.02	8.40
13. ORDNANCE & ACCESSORIES	0.11	0.12	0.13	0.14	0.15	0.16	7.94
27. CHEMICALS & PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	7.63
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	5.23
37. PRIMARY FERROUS METALS	0.16	0.18	0.20	0.22	0.24	0.26	10.50
38. NONFERROUS METALS	0.10	0.12	0.13	0.14	0.15	0.16	9.83
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	7.55
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.02	0.02	0.02	0.02	0.02	7.69
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.93
43. ENGINES & TURBINES	0.02	0.03	0.03	0.03	0.03	0.03	7.70
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.38
49. GENERAL INDUSTRY MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	7.50
56. RADIO, TV, & COMMUNICATION EQ.	0.11	0.12	0.13	0.15	0.15	0.16	8.31
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.06	0.06	11.34
60. AIRCRAFT & PARTS	0.60	0.71	0.82	0.94	1.04	1.11	13.06
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	3.12
62. INSTRUMENTS & SUPPLIES	0.02	0.02	0.02	0.02	0.03	0.03	8.43
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	6.28
73. BUSINESS SERVICES	0.07	0.08	0.09	0.11	0.12	0.13	12.14
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	4.15
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.03	0.03	0.03	0.04	0.04	0.04	5.71
82. GOVERNMENT INDUSTRY	0.51	0.50	0.51	0.52	0.53	0.54	1.01
TOTAL, ALL INDUSTRIES	1.95	2.16	2.37	2.61	2.81	2.94	8.59
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.28	0.30	0.31	0.32	0.31	0.32	2.36
8. CRUDE PETROLEUM & N. GAS	0.09	0.09	0.09	0.09	0.09	0.09	-0.24
11. NEW CONSTRUCTION	0.37	0.37	0.38	0.39	0.40	0.41	1.99
13. ORDNANCE & ACCESSORIES	0.18	0.16	0.18	0.19	0.19	0.19	1.84
27. CHEMICALS & PRODUCTS	0.26	0.27	0.27	0.27	0.28	0.28	1.11
31. PET REFINING & REL. PROD.	0.18	0.18	0.18	0.18	0.18	0.18	0.29
37. PRIMARY FERROUS METALS	2.18	2.31	2.45	2.54	2.60	2.65	3.97
38. NONFERROUS METALS	1.20	1.25	1.31	1.35	1.38	1.41	3.21
40. FAB. STRUCTURAL METAL PRODUCTS	0.27	0.27	0.28	0.29	0.29	0.29	1.82

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
8. METALLURGICAL ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
41. SCREW MACHINE PROD. & STAMPINGS	0.22	0.23	0.24	0.24	0.24	0.24	2.16
42. OTHER FAB. METAL PRODUCTS	0.14	0.15	0.15	0.16	0.16	0.17	3.22
43. ENGINES & TURBINES	0.29	0.30	0.31	0.31	0.31	0.31	1.76
47. METALWORKING MACH. & EQ.	0.16	0.17	0.18	0.18	0.19	0.19	3.78
49. GENERAL INDUSTRY MACHINERY	0.34	0.35	0.37	0.38	0.38	0.39	2.61
56. RADIO, TV, & COMMUNICATION EQ.	0.25	0.26	0.27	0.27	0.27	0.28	2.15
57. ELECTRONIC COMPONENTS & ACCESS.	0.16	0.17	0.18	0.19	0.19	0.20	3.62
60. AIRCRAFT & PARTS	1.20	1.31	1.40	1.50	1.57	1.62	6.19
61. OTHER TRANSPORTATION EQ.	0.07	0.08	0.08	0.08	0.08	0.08	1.72
62. INSTRUMENTS & SUPPLIES	0.15	0.16	0.16	0.17	0.18	0.18	2.96
68. UTILITIES	0.27	0.27	0.27	0.28	0.28	0.28	0.32
73. BUSINESS SERVICES	1.47	1.58	1.69	1.81	1.92	2.02	6.57
77. MISC. SERVICES	1.24	1.26	1.28	1.31	1.34	1.38	2.20
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.20	0.21	0.22	0.22	0.23	0.23	3.26
82. GOVERNMENT INDUSTRY	1.60	1.60	1.61	1.65	1.68	1.70	1.22
TOTAL, ALL INDUSTRIES	14.58	15.15	15.77	16.33	16.75	17.11	3.26

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
9. MINING ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.02	0.02	0.02	0.02	0.02	0.02	8.25
6. NONFERROUS METAL MINING	0.03	0.04	0.04	0.05	0.05	0.05	10.61
7. COAL MINING	0.05	0.05	0.06	0.07	0.08	0.08	12.24
8. CRUDE PETROLEUM & N. GAS	0.02	0.02	0.02	0.02	0.02	0.02	4.64
9. STONE&CLAY MINING & QUARRYING	0.01	0.01	0.01	0.01	0.01	0.01	9.96
11. NEW CONSTRUCTION	0.01	0.01	0.01	0.01	0.01	0.01	8.34
38. NONFERROUS METALS	0.01	0.01	0.01	0.01	0.01	0.01	9.44
60. AIRCRAFT & PARTS	0.01	0.01	0.01	0.01	0.01	0.01	7.98
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.03	0.04	0.04	0.04	0.04	0.04	5.75
TOTAL, ALL INDUSTRIES	0.20	0.22	0.24	0.27	0.29	0.30	8.97
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.32	0.34	0.36	0.36	0.36	0.35	2.06
6. NONFERROUS METAL MINING	0.57	0.60	0.62	0.63	0.63	0.63	2.06
7. COAL MINING	1.64	1.79	1.92	2.02	2.14	2.24	6.38
8. CRUDE PETROLEUM & N. GAS	0.23	0.23	0.23	0.22	0.22	0.23	-0.17
9. STONE&CLAY MINING & QUARRYING	0.26	0.27	0.28	0.29	0.29	0.30	2.56
11. NEW CONSTRUCTION	0.17	0.17	0.17	0.18	0.18	0.19	1.94
38. NONFERROUS METALS	0.11	0.11	0.12	0.12	0.12	0.12	2.84
60. AIRCRAFT & PARTS	0.02	0.02	0.02	0.02	0.02	0.02	1.42
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.60	0.63	0.65	0.67	0.69	0.71	3.16
TOTAL, ALL INDUSTRIES	6.03	6.29	6.53	6.73	6.90	7.04	3.16

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
10. PETROLEUM ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.55	0.62	0.67	0.74	0.80	0.84	8.89
13. DRDNANCE & ACCESSORIES	0.02	0.02	0.02	0.02	0.02	0.02	8.18
31. PET REFINING & REL. PRDD.	0.03	0.04	0.04	0.04	0.05	0.05	7.10
60. AIRCRAFT & PARTS	0.02	0.02	0.03	0.03	0.03	0.03	8.62
73. BUSINESS SERVICES	0.03	0.04	0.04	0.04	0.05	0.05	7.25
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.04	0.05	0.05	0.05	7.97
TOTAL, ALL INDUSTRIES	0.72	0.80	0.87	0.96	1.04	1.09	8.58
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	7.48	7.84	8.19	8.39	8.63	9.05	3.89
13. DRDNANCE & ACCESSORIES	0.03	0.03	0.03	0.03	0.03	0.03	2.06
31. PET REFINING & REL. PRDD.	0.65	0.66	0.68	0.69	0.71	0.72	2.07
60. AIRCRAFT & PARTS	0.04	0.04	0.04	0.04	0.05	0.05	2.02
73. BUSINESS SERVICES	0.68	0.69	0.71	0.73	0.74	0.75	1.93
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.78	0.81	0.84	0.86	0.88	0.91	3.14
TOTAL, ALL INDUSTRIES	12.69	13.15	13.61	13.94	14.28	14.81	3.14
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
11. ALL OTHER ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.03	0.03	0.04	0.04	0.04	0.04	2.22
11. NEW CONSTRUCTION	0.08	0.09	0.10	0.11	0.11	0.12	7.43
13. ORDNANCE & ACCESSORIES	6.85	7.78	8.51	9.23	9.77	10.17	8.22
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.08
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	6.76
27. CHEMICALS & PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	7.63
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.03	0.03	0.03	0.03	8.71
31. PET REFINING & REL. PROD.	0.04	0.05	0.05	0.05	0.05	0.05	3.08
32. RUBBER & MISC. PLASTICS PROD.	0.05	0.05	0.06	0.07	0.07	0.08	10.60
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.44
36. STONE & CLAY PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	7.80
37. PRIMARY FERROUS METALS	0.11	0.12	0.13	0.14	0.14	0.15	6.98
38. NONFERROUS METALS	0.08	0.09	0.10	0.11	0.12	0.13	9.37
40. FAB. STRUCTURAL METAL PRODUCTS	0.11	0.12	0.13	0.14	0.14	0.15	7.53
41. SCREW MACHINE PROD.&STAMPINGS	0.04	0.05	0.05	0.08	0.06	0.06	7.70
42. OTHER FAB. METAL PRODUCTS	0.03	0.04	0.04	0.04	0.05	0.05	10.09
43. ENGINES & TURBINES	0.09	0.10	0.10	0.11	0.11	0.12	6.32
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.02	0.03	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.12
47. METALWORKING MACH. & EQ.	0.06	0.07	0.08	0.08	0.09	0.09	9.36
49. GENERAL INDUSTRY MACHINERY	0.08	0.09	0.10	0.10	0.11	0.11	5.85
50. MISC. NONELECTRICAL MACH.	0.02	0.03	0.03	0.03	0.03	0.03	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.24	0.27	0.29	0.31	0.33	0.34	7.32
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.03	0.03	0.03	0.04	13.36
53. ELECTRICAL MACHINERY	0.07	0.09	0.09	0.10	0.11	0.12	8.98
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.06	8.26
56. RADIO, TV, & COMMUNICATION EQ.	5.19	5.93	6.48	7.00	7.33	7.46	7.53
57. ELECTRONIC COMPONENTS & ACCESS.	0.58	0.69	0.77	0.87	0.94	0.99	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.05	0.05	0.06	0.06	0.07	0.07	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.19	0.23	0.26	0.31	0.37	0.43	17.14
60. AIRCRAFT & PARTS	8.13	9.15	10.03	11.01	11.72	11.97	8.03
61. OTHER TRANSPORTATION EQ.	0.63	0.67	0.69	0.70	0.72	0.74	3.11
62. INSTRUMENTS & SUPPLIES	0.60	0.68	0.74	0.81	0.86	0.88	7.97
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.09	0.09	0.10	0.11	0.12	0.13	8.66
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.03	0.04	0.04	3.78
66. COMMUNICATION EXC. RADIO & TV	0.15	0.16	0.17	0.18	0.19	0.20	4.94
68. UTILITIES	0.07	0.08	0.08	0.09	0.09	0.09	5.92

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
11. ALL OTHER ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	0.08	0.09	0.10	0.11	0.12	0.13	9.54
73. BUSINESS SERVICES	0.26	0.28	0.31	0.34	0.36	0.37	7.81
77. MISC. SERVICES	0.09	0.09	0.10	0.10	0.11	0.11	3.91
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.17	2.26	2.36	2.47	2.52	2.54	3.15
82. GOVERNMENT INDUSTRY	11.57	11.34	11.57	11.89	12.10	12.18	1.04
TOTAL, ALL INDUSTRIES	38.18	41.25	44.12	47.22	49.43	50.59	5.79
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.45	0.44	0.43	0.41	0.40	0.40	-2.47
11. NEW CONSTRUCTION	2.19	2.21	2.23	2.27	2.30	2.31	1.08
13. ORDNANCE & ACCESSORIES	11.34	11.64	11.88	12.20	12.41	12.58	2.10
14. FOOD & KINDRED PRODUCTS	0.88	0.89	0.90	0.89	0.88	0.88	-0.04
24. PAPER & ALLIED PRODUCTS	0.58	0.60	0.61	0.61	0.61	0.61	0.92
27. CHEMICALS & PRODUCTS	1.25	1.28	1.30	1.31	1.32	1.32	1.11
28. PLASTICS & SYNTHETIC MATLS.	0.89	0.93	0.96	0.99	1.00	1.00	2.32
31. PET REFINING & REL. PRODD.	0.82	0.80	0.79	0.78	0.77	0.75	-1.75
32. RUBBER & MISC. PLASTICS PRODD.	1.70	1.76	1.84	1.90	1.96	1.98	3.15
35. GLASS & GLASS PRODUCTS	0.32	0.33	0.33	0.34	0.34	0.33	0.73
36. STONE & CLAY PRODUCTS	0.72	0.73	0.74	0.75	0.75	0.74	0.60
37. PRIMARY FERROUS METALS	1.48	1.52	1.55	1.56	1.55	1.53	0.66
38. NONFERROUS METALS	0.97	1.01	1.05	1.08	1.10	1.12	2.78
40. FAB. STRUCTURAL METAL PRODUCTS	2.36	2.36	2.42	2.49	2.55	2.58	1.80
41. SCREW MACHINE PRODD. & STAMPINGS	0.71	0.74	0.77	0.78	0.78	0.79	2.17
42. OTHER FAB. METAL PRODUCTS	0.68	0.70	0.74	0.76	0.78	0.80	3.37
43. ENGINES & TURBINES	1.03	1.05	1.08	1.07	1.07	1.06	0.46
45. CONSTR. & MINING MACHINERY	1.53	1.62	1.71	1.77	1.81	1.83	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.55	0.57	0.60	0.62	0.64	0.65	3.62
47. METALWORKING MACH. & EQ.	1.16	1.21	1.28	1.33	1.37	1.39	3.76
49. GENERAL INDUSTRY MACHINERY	1.88	1.90	1.96	1.98	1.98	1.98	1.04
50. MISC. NONELECTRICAL MACH.	0.21	0.22	0.22	0.23	0.23	0.23	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	6.26	6.51	6.79	6.91	7.01	7.17	2.72
52. SERVICE INDUSTRY MACHINES	1.16	1.20	1.26	1.28	1.28	1.28	2.10
53. ELECTRICAL MACHINERY	1.51	1.53	1.60	1.63	1.65	1.66	1.94
55. ELECTRIC LIGHTING & WIRING EQ.	0.90	0.91	0.94	0.96	0.97	0.98	1.71
56. RADIO, TV, & COMMUNICATION EQ.	12.28	12.50	12.82	12.97	13.02	13.17	1.42
57. ELECTRONIC COMPONENTS & ACCESS.	2.64	2.75	2.89	3.00	3.09	3.15	3.65
58. MISC. ELECTRICAL MACH. & EQ.	1.71	1.77	1.84	1.86	1.89	1.90	2.12
59. MOTOR VEHICLES & EQUIPMENT	10.02	10.47	10.83	11.00	11.12	11.19	2.23

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
11. ALL OTHER ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
60. AIRCRAFT & PARTS	16.29	16.86	17.23	17.68	17.63	17.52	1.47
61. OTHER TRANSPORTATION EQ.	2.19	2.25	2.32	2.37	2.37	2.38	1.70
62. INSTRUMENTS & SUPPLIES	5.18	5.26	5.45	5.65	5.79	5.87	2.52
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.96	1.99	2.08	2.17	2.25	2.31	3.29
65. TRANSPORTATION & WAREHOUSING	0.71	0.72	0.73	0.75	0.75	0.74	0.88
66. COMMUNICATION EXC. RADIO & TV	6.24	6.27	6.41	6.46	6.60	6.64	1.24
68. UTILITIES	3.21	3.21	3.21	3.20	3.21	3.20	-0.02
69. WHOLESALE & RETAIL TRADE	13.11	13.52	13.93	14.28	14.55	14.83	2.50
73. BUSINESS SERVICES	5.26	5.38	5.52	5.69	5.83	5.93	2.46
77. MISC. SERVICES	14.04	14.21	14.41	14.72	15.07	15.48	1.96
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	10.18	10.37	10.61	10.83	10.98	11.11	1.76
82. GOVERNMENT INDUSTRY	43.85	43.80	44.26	45.10	45.92	46.60	1.22
TOTAL, ALL INDUSTRIES	199.58	203.28	207.99	212.31	215.31	217.82	1.76

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
12. SCIENTISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.78
4. AGR., FORESTRY, & FISHERY SERV.	0.02	0.02	0.02	0.03	0.03	0.03	6.88
5. IRDN ORE MINING	0.01	0.01	0.02	0.02	0.02	0.02	8.30
6. NONFERROUS METAL MINING	0.11	0.13	0.15	0.16	0.18	0.19	10.37
7. COAL MINING	0.01	0.02	0.02	0.02	0.02	0.02	9.22
8. CRUDE PETROLEUM & N. GAS	0.72	0.80	0.85	0.93	1.01	1.05	7.72
9. STONE & CLAY MINING & QUARRYING	0.01	0.01	0.01	0.02	0.02	0.02	10.17
11. NEW CONSTRUCTION	0.01	0.01	0.01	0.01	0.01	0.01	8.35
13. ORDNANCE & ACCESSORIES	0.70	0.78	0.84	0.90	0.94	0.97	6.91
14. FOOD & KINDRED PRODUCTS	0.04	0.04	0.04	0.04	0.05	0.05	5.84
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.44
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	7.08
20. LUMBER & WOOD PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	8.09
24. PAPER & ALLIED PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	7.26
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.02	0.02	0.02	5.91
27. CHEMICALS & PRODUCTS	0.81	0.91	0.98	1.07	1.16	1.23	8.50
28. PLASTICS & SYNTHETIC MATLS.	0.09	0.10	0.11	0.13	0.14	0.15	10.49
29. DRUGS, CLEANING & TOILET PREP.	0.08	0.08	0.09	0.09	0.10	0.10	5.23
30. PAINTS & ALLIED PRODUCTS	0.14	0.16	0.18	0.20	0.22	0.23	10.21
31. PET REFINING & REL. PROD.	0.20	0.21	0.23	0.24	0.26	0.27	6.03
32. RUBBER & MISC. PLASTICS PROD.	0.05	0.05	0.06	0.07	0.07	0.08	10.17
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.62
36. STONE & CLAY PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.05	7.59
37. PRIMARY FERROUS METALS	0.07	0.07	0.08	0.09	0.09	0.10	8.65
38. NONFERROUS METALS	0.09	0.10	0.11	0.12	0.13	0.13	9.16
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.03	0.03	0.04	0.04	7.58
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.01	7.61
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	8.74
43. ENGINES & TURBINES	0.04	0.04	0.05	0.05	0.05	0.06	7.71
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.63
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.02	0.02	0.02	7.25
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.12
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.21
56. RADIO, TV, & COMMUNICATION EQ.	1.20	1.38	1.52	1.66	1.75	1.79	8.47
57. ELECTRONIC COMPONENTS & ACCESS.	0.12	0.14	0.16	0.18	0.19	0.20	11.38
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.51
59. MOTOR VEHICLES & EQUIPMENT	0.04	0.05	0.06	0.07	0.08	0.09	17.14

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
12. SCIENTISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH
							82 TO 87
60. AIRCRAFT & PARTS	1.55	1.76	1.95	2.16	2.32	2.40	9.16
61. OTHER TRANSPORTATION EQ.	0.05	0.06	0.06	0.06	0.06	0.06	3.04
62. INSTRUMENTS & SUPPLIES	0.23	0.26	0.28	0.31	0.33	0.34	8.37
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	0.06	0.06	0.07	0.08	0.08	0.09	8.58
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.04	0.04	0.04	4.32
66. COMMUNICATION EXC. RADIO & TV	0.02	0.02	0.02	0.02	0.02	0.02	5.78
68. UTILITIES	0.03	0.03	0.04	0.04	0.04	0.04	6.01
69. WHOLESALE & RETAIL TRAOE	0.03	0.03	0.04	0.04	0.04	0.04	8.65
70. FINANCE & INSURANCE	0.09	0.10	0.11	0.13	0.14	0.15	10.90
73. BUSINESS SERVICES	0.88	0.99	1.08	1.19	1.27	1.31	8.35
77. MISC. SERVICES	0.39	0.40	0.42	0.45	0.47	0.48	4.09
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.89	1.90	1.97	2.05	2.10	2.13	2.36
82. GOVERNMENT INDUSTRY	18.64	18.29	18.65	19.18	19.51	19.66	1.07
TOTAL, ALL INDUSTRIES	28.70	29.35	30.61	32.15	33.29	33.91	3.40
TOTAL EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	4.38	4.39	4.42	4.40	4.39	4.38	0.02
4. AGR.,FORESTRY,&FISHERY SERV.	1.13	1.17	1.18	1.20	1.22	1.24	1.77
5. IRON ORE MINING	0.24	0.26	0.28	0.28	0.28	0.27	2.11
6. NONFERROUS METAL MINING	1.97	2.07	2.14	2.18	2.15	2.16	1.84
7. COAL MINING	0.51	0.54	0.56	0.57	0.59	0.61	3.51
8. CRUDE PETROLEUM & N. GAS	9.79	10.13	10.46	10.61	10.80	11.22	2.78
9. STONE&CLAY MINING & QUARRYING	0.36	0.36	0.38	0.39	0.40	0.41	2.75
11. NEW CONSTRUCTION	0.26	0.26	0.27	0.28	0.28	0.29	1.94
13. ORONANCE & ACCESSORIES	1.15	1.17	1.18	1.19	1.20	1.20	0.86
14. FOOD & KINDRED PRODUCTS	5.46	5.57	5.63	5.64	5.62	5.60	0.49
16. FABRIC,YARN & THREAD MILLS	0.45	0.46	0.48	0.49	0.49	0.50	2.04
17. MISC. TEXTILE GOODS	0.39	0.40	0.42	0.43	0.44	0.44	2.68
20. LUMBER & WOOD PRODUCTS	0.69	0.74	0.76	0.78	0.78	0.77	2.33
24. PAPER & ALLIED PRODUCTS	1.61	1.67	1.70	1.71	1.72	1.73	1.39
26. PRINTING & PUBLISHING	0.77	0.77	0.78	0.78	0.78	0.79	0.30
27. CHEMICALS & PRODUCTS	16.93	17.40	17.82	18.14	18.39	18.62	1.93
28. PLASTICS & SYNTHETIC MATLS.	3.71	3.92	4.13	4.30	4.43	4.52	3.99
29. DRUGS,CLEANING & TOILET PREP.	21.81	22.20	22.78	23.30	23.54	23.83	1.79
30. PAINTS & ALLIED PRODUCTS	2.71	2.89	3.05	3.22	3.34	3.44	4.89
31. PET REFINING & REL. PROD.	3.73	3.75	3.80	3.86	3.90	3.93	1.06
32. RUBBER & MISC. PLASTICS PROD.	1.77	1.82	1.90	1.96	2.01	2.02	2.75
35. GLASS & GLASS PRODUCTS	0.41	0.42	0.43	0.43	0.43	0.43	0.89

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
12. SCIENTISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
36. STONE & CLAY PRODUCTS	1.08	1.10	1.11	1.13	1.12	1.10	0.40
37. PRIMARY FERROUS METALS	0.91	0.95	0.99	1.01	1.02	1.02	2.23
38. NONFERROUS METALS	1.03	1.06	1.11	1.14	1.15	1.17	2.58
40. FAB. STRUCTURAL METAL PRODUCTS	0.57	0.58	0.59	0.61	0.62	0.63	1.85
41. SCREW MACHINE PROD. & STAMPINGS	0.15	0.15	0.16	0.16	0.16	0.16	2.08
42. OTHER FAB. METAL PRODUCTS	0.38	0.39	0.41	0.41	0.42	0.43	2.10
43. ENGINES & TURBINES	0.48	0.49	0.51	0.51	0.52	0.52	1.77
49. GENERAL INDUSTRY MACHINERY	0.14	0.15	0.15	0.16	0.16	0.16	2.73
51. OFFICE, COMPUTING & ACCT. MACH.	0.31	0.32	0.34	0.34	0.35	0.36	2.68
53. ELECTRICAL MACHINERY	0.17	0.18	0.18	0.19	0.19	0.19	2.07
55. ELECTRIC LIGHTING & WIRING EQ.	0.17	0.17	0.17	0.18	0.18	0.18	1.87
56. RADIO, TV, & COMMUNICATION EQ.	2.83	2.91	3.01	3.07	3.11	3.17	2.30
57. ELECTRONIC COMPONENTS & ACCESS.	0.54	0.57	0.59	0.62	0.64	0.65	3.88
58. MISC. ELECTRICAL MACH. & EQ.	0.32	0.33	0.35	0.35	0.35	0.36	2.07
59. MOTOR VEHICLES & EQUIPMENT	2.13	2.22	2.30	2.34	2.38	2.38	2.23
60. AIRCRAFT & PARTS	3.10	3.24	3.35	3.47	3.49	3.51	2.53
61. OTHER TRANSPORTATION EQ.	0.18	0.19	0.19	0.20	0.20	0.20	1.63
62. INSTRUMENTS & SUPPLIES	1.98	2.00	2.08	2.16	2.22	2.26	2.90
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.34	1.36	1.42	1.49	1.54	1.58	3.22
65. TRANSPORTATION & WAREHOUSING	0.74	0.76	0.77	0.79	0.79	0.79	1.40
66. COMMUNICATION EXC. RADIO & TV	0.61	0.62	0.64	0.65	0.67	0.68	2.08
68. UTILITIES	1.41	1.42	1.42	1.42	1.42	1.42	0.06
69. WHOLESALE & RETAIL TRADE	4.80	4.91	5.01	5.10	5.15	5.21	1.67
70. FINANCE & INSURANCE	10.30	10.64	11.02	11.46	11.92	12.37	3.72
73. BUSINESS SERVICES	18.14	18.66	19.25	19.95	20.54	21.00	2.97
77. MISC. SERVICES	60.86	61.69	62.88	64.12	65.79	67.65	2.14
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	15.03	15.25	15.55	15.90	16.21	16.50	1.88
82. GOVERNMENT INDUSTRY	124.93	124.95	126.45	129.02	131.57	133.68	1.36
TOTAL, ALL INDUSTRIES	338.32	343.14	349.91	357.73	364.73	371.39	1.88

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
13. CHEMISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.02	0.02	0.03	0.03	0.03	0.03	11.57
7. COAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	9.17
8. CRUDE PETROLEUM & N. GAS	0.03	0.03	0.03	0.03	0.04	0.04	4.65
13. ORDNANCE & ACCESSORIES	0.33	0.37	0.40	0.43	0.44	0.46	6.66
14. FOOD & KINDRED PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	5.69
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.55
24. PAPER & ALLIED PRODUCTS	0.03	0.03	0.03	0.03	0.04	0.04	7.42
27. CHEMICALS & PRODUCTS	0.69	0.77	0.83	0.91	0.99	1.04	8.67
28. PLASTICS & SYNTHETIC MATLS.	0.08	0.09	0.10	0.11	0.12	0.13	10.77
29. DRUGS, CLEANING & TOILET PREP.	0.04	0.04	0.04	0.05	0.05	0.05	6.10
30. PAINTS & ALLIED PRODUCTS	0.14	0.16	0.18	0.20	0.22	0.23	10.24
31. PET REFINING & REL. PROD.	0.14	0.15	0.16	0.18	0.19	0.20	6.34
32. RUBBER & MISC. PLASTICS PROD.	0.04	0.05	0.05	0.06	0.07	0.07	10.19
36. STONE & CLAY PRODUCTS	0.03	0.04	0.04	0.04	0.04	0.05	7.70
37. PRIMARY FERROUS METALS	0.08	0.07	0.07	0.08	0.09	0.09	8.75
38. NONFERROUS METALS	0.08	0.09	0.10	0.11	0.12	0.12	9.08
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.98
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.03	8.67
43. ENGINES & TURBINES	0.02	0.02	0.02	0.02	0.02	0.02	7.74
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.27
56. RADIO, TV, & COMMUNICATION EQ.	0.07	0.08	0.09	0.09	0.10	0.10	8.26
57. ELECTRONIC COMPONENTS & ACCESS.	0.06	0.07	0.08	0.09	0.10	0.11	11.37
60. AIRCRAFT & PARTS	0.25	0.29	0.31	0.35	0.37	0.38	8.58
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	3.42
62. INSTRUMENTS & SUPPLIES	0.09	0.10	0.11	0.12	0.13	0.14	8.28
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.04	0.05	0.05	0.06	0.06	0.06	8.59
68. UTILITIES	0.01	0.01	0.01	0.02	0.02	0.02	6.15
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.01	0.01	0.01	0.01	8.43
73. BUSINESS SERVICES	0.29	0.32	0.35	0.39	0.42	0.43	8.47
77. MISC. SERVICES	0.07	0.08	0.08	0.08	0.09	0.09	3.44
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.11	0.11	0.12	0.13	0.13	0.13	4.02
82. GOVERNMENT INDUSTRY	1.83	1.81	1.86	1.93	1.98	2.01	1.81
TOTAL, ALL INDUSTRIES	4.73	5.03	5.36	5.75	6.07	6.27	5.82
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.33	0.35	0.37	0.38	0.38	0.39	2.95

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
13. CHEMISTS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
7. COAL MINING	0.23	0.24	0.25	0.26	0.27	0.27	3.47
8. CRUDE PETROLEUM & N. GAS	0.39	0.39	0.39	0.39	0.38	0.39	-0.15
13. ORDNANCE & ACCESSORIES	0.55	0.55	0.56	0.56	0.56	0.56	0.63
14. FOOD & KINDRED PRODUCTS	4.67	4.76	4.81	4.82	4.80	4.79	0.54
16. FABRIC, YARN & THREAD MILLS	0.41	0.43	0.44	0.45	0.46	0.46	2.14
24. PAPER & ALLIED PRODUCTS	1.38	1.43	1.45	1.47	1.48	1.49	1.55
27. CHEMICALS & PRODUCTS	14.31	14.73	15.11	15.41	15.64	15.86	2.09
28. PLASTICS & SYNTHETIC MATLS.	3.20	3.38	3.57	3.73	3.85	3.94	4.25
29. DRUGS, CLEANING & TOILET PREP.	10.83	11.12	11.51	11.87	12.09	12.33	2.64
30. PAINTS & ALLIED PRODUCTS	2.68	2.86	3.02	3.18	3.30	3.40	4.91
31. PET REFINING & REL. PROD.	2.68	2.71	2.75	2.80	2.84	2.87	1.35
32. RUBBER & MISC. PLASTICS PROD.	1.60	1.65	1.72	1.77	1.81	1.83	2.77
36. STONE & CLAY PRODUCTS	0.97	0.98	0.99	1.01	1.01	0.99	0.51
37. PRIMARY FERROUS METALS	0.83	0.86	0.89	0.91	0.92	0.93	2.32
38. NONFERROUS METALS	0.93	0.96	1.00	1.03	1.04	1.05	2.48
40. FAB. STRUCTURAL METAL PRODUCTS	0.21	0.21	0.22	0.23	0.23	0.23	2.23
42. OTHER FAB. METAL PRODUCTS	0.36	0.37	0.38	0.39	0.40	0.40	2.04
43. ENGINES & TURBINES	0.20	0.21	0.21	0.21	0.22	0.22	1.80
51. OFFICE, COMPUTING & ACCT. MACH.	0.15	0.15	0.16	0.16	0.16	0.17	2.67
56. RADIO, TV, & COMMUNICATION EQ.	0.16	0.16	0.17	0.17	0.17	0.18	2.10
57. ELECTRONIC COMPONENTS & ACCESS.	0.29	0.30	0.31	0.33	0.33	0.34	3.65
60. AIRCRAFT & PARTS	0.51	0.53	0.54	0.56	0.56	0.56	1.98
61. OTHER TRANSPORTATION EQ.	0.07	0.07	0.07	0.07	0.07	0.07	2.01
62. INSTRUMENTS & SUPPLIES	0.79	0.81	0.84	0.87	0.90	0.91	2.82
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.97	0.99	1.03	1.08	1.11	1.14	3.23
68. UTILITIES	0.58	0.58	0.58	0.58	0.58	0.58	0.19
69. WHOLESALE & RETAIL TRADE	0.93	0.95	0.97	0.98	0.99	1.00	1.46
73. BUSINESS SERVICES	5.91	6.09	6.29	6.53	6.73	6.89	3.09
77. MISC. SERVICES	11.60	11.68	11.79	11.99	12.23	12.50	1.50
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.42	1.46	1.49	1.53	1.56	1.58	2.12
82. GOVERNMENT INDUSTRY	17.75	17.83	18.11	18.53	18.95	19.35	1.74
TOTAL, ALL INDUSTRIES	91.88	93.89	96.24	98.56	100.38	102.03	2.12

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
14. PHYSICISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.15	0.17	0.18	0.19	0.20	0.21	6.56
27. CHEMICALS & PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	7.91
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.98
43. ENGINES & TURBINES	0.01	0.01	0.01	0.02	0.02	0.02	7.71
56. RADIO, TV, & COMMUNICATION EQ.	0.30	0.34	0.38	0.42	0.44	0.46	9.04
57. ELECTRONIC COMPONENTS & ACCESS.	0.03	0.04	0.04	0.05	0.05	0.05	11.38
60. AIRCRAFT & PARTS	0.21	0.24	0.28	0.32	0.35	0.38	12.55
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	3.28
62. INSTRUMENTS & SUPPLIES	0.03	0.03	0.04	0.04	0.04	0.05	7.76
73. BUSINESS SERVICES	0.16	0.18	0.20	0.22	0.23	0.24	8.01
77. MISC. SERVICES	0.03	0.03	0.03	0.04	0.04	0.04	2.96
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.18	0.18	0.18	0.19	0.19	0.19	1.97
82. GOVERNMENT INDUSTRY	3.18	3.11	3.17	3.25	3.30	3.32	0.90
TOTAL, ALL INDUSTRIES	4.34	4.41	4.59	4.81	4.96	5.04	3.02
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.25	0.25	0.25	0.26	0.26	0.26	0.53
27. CHEMICALS & PRODUCTS	0.38	0.39	0.40	0.40	0.41	0.41	1.37
40. FAB. STRUCTURAL METAL PRODUCTS	0.16	0.16	0.17	0.17	0.17	0.18	1.28
43. ENGINES & TURBINES	0.14	0.14	0.15	0.15	0.15	0.15	1.77
56. RADIO, TV, & COMMUNICATION EQ.	0.70	0.72	0.75	0.77	0.79	0.81	2.84
57. ELECTRONIC COMPONENTS & ACCESS.	0.14	0.15	0.15	0.16	0.16	0.17	3.66
60. AIRCRAFT & PARTS	0.42	0.45	0.48	0.51	0.53	0.55	5.72
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	1.87
62. INSTRUMENTS & SUPPLIES	0.27	0.27	0.28	0.29	0.30	0.30	2.32
73. BUSINESS SERVICES	3.36	3.45	3.54	3.66	3.76	3.83	2.85
77. MISC. SERVICES	5.12	5.13	5.15	5.21	5.29	5.38	1.02
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.73	0.73	0.74	0.76	0.77	0.78	1.49
82. GOVERNMENT INDUSTRY	9.52	9.49	9.57	9.72	9.88	10.01	1.00
TOTAL, ALL INDUSTRIES	22.17	22.34	22.66	23.11	23.52	23.88	1.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
15. BIOLOGICAL & MEDICAL SCIENTISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
11. NEW CONSTRUCTION	0.01	0.01	0.01	0.01	0.01	0.01	8.31
13. ORDNANCE & ACCESSORIES	0.05	0.06	0.07	0.07	0.08	0.08	7.71
27. CHEMICALS & PRODUCTS	0.04	0.04	0.05	0.05	0.05	0.06	7.55
29. DRUGS, CLEANING & TOILET PREP.	0.02	0.03	0.03	0.03	0.03	0.03	4.34
60. AIRCRAFT & PARTS	0.02	0.02	0.03	0.03	0.03	0.03	8.60
62. INSTRUMENTS & SUPPLIES	0.04	0.05	0.06	0.06	0.07	0.07	9.06
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.01	0.01	0.01	0.01	8.40
73. BUSINESS SERVICES	0.08	0.09	0.10	0.11	0.11	0.11	6.64
77. MISC. SERVICES	0.14	0.14	0.15	0.16	0.17	0.17	4.38
82. GOVERNMENT INDUSTRY	0.88	0.86	0.88	0.90	0.92	0.93	1.05
TOTAL, ALL INDUSTRIES	1.37	1.39	1.44	1.51	1.56	1.59	2.99
TOTAL EMPLOYMENT							
11. NEW CONSTRUCTION	0.19	0.20	0.20	0.21	0.21	0.21	1.91
13. ORDNANCE & ACCESSORIES	0.09	0.09	0.09	0.10	0.10	0.10	1.61
27. CHEMICALS & PRODUCTS	0.83	0.84	0.86	0.86	0.87	0.87	1.04
29. DRUGS, CLEANING & TOILET PREP.	6.98	7.04	7.16	7.26	7.28	7.31	0.93
60. AIRCRAFT & PARTS	0.04	0.04	0.04	0.05	0.05	0.05	2.01
62. INSTRUMENTS & SUPPLIES	0.39	0.40	0.42	0.43	0.45	0.46	3.55
69. WHOLESALE & RETAIL TRADE	1.08	1.11	1.13	1.14	1.15	1.16	1.44
73. BUSINESS SERVICES	1.72	1.74	1.76	1.80	1.82	1.84	1.34
77. MISC. SERVICES	21.69	22.04	22.46	23.04	23.70	24.44	2.42
82. GOVERNMENT INDUSTRY	21.81	21.71	21.86	22.17	22.48	22.77	0.87
TOTAL, ALL INDUSTRIES	56.65	57.08	57.86	58.96	60.03	61.15	1.54

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
16. LIFE & PHYSICAL SCIENTISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.02	0.02	0.02	0.02	0.02	0.02	6.86
5. IRON ORE MINING	0.01	0.01	0.01	0.01	0.01	0.01	8.56
6. NONFERROUS METAL MINING	0.09	0.11	0.12	0.13	0.14	0.15	10.09
7. COAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	9.27
8. CRUDE PETROLEUM & N. GAS	0.66	0.73	0.78	0.85	0.93	0.97	7.99
9. STONE & CLAY MINING & QUARRYING	0.01	0.01	0.01	0.01	0.01	0.01	10.13
13. ORDNANCE & ACCESSORIES	0.07	0.08	0.08	0.09	0.09	0.10	7.16
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	7.94
27. CHEMICALS & PRODUCTS	0.04	0.05	0.05	0.05	0.06	0.06	7.52
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.02	4.33
31. PET REFINING & REL. PROD.	0.03	0.03	0.03	0.03	0.03	0.03	5.23
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.69
56. RADIO, TV, & COMMUNICATION EQ.	0.19	0.22	0.24	0.26	0.27	0.28	8.23
60. AIRCRAFT & PARTS	0.16	0.19	0.20	0.22	0.24	0.25	8.59
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	2.59
62. INSTRUMENTS & SUPPLIES	0.03	0.03	0.03	0.03	0.04	0.04	8.32
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.52
65. TRANSPORTATION & WAREHOUSING	0.01	0.01	0.02	0.02	0.02	0.02	4.68
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	5.67
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.01	0.02	0.02	0.02	8.85
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.01	0.01	10.01
73. BUSINESS SERVICES	0.15	0.17	0.19	0.21	0.23	0.24	9.40
77. MISC. SERVICES	0.08	0.09	0.09	0.09	0.10	0.10	4.03
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.79	1.79	1.84	1.91	1.96	1.99	2.04
82. GOVERNMENT INDUSTRY	6.84	6.71	6.85	7.04	7.16	7.22	1.08
TOTAL, ALL INDUSTRIES	10.33	10.39	10.74	11.19	11.53	11.70	2.52
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.90	0.92	0.93	0.95	0.96	0.98	1.77
5. IRON ORE MINING	0.15	0.17	0.18	0.18	0.18	0.17	2.36
6. NONFERROUS METAL MINING	1.62	1.69	1.74	1.77	1.75	1.75	1.58
7. COAL MINING	0.21	0.22	0.23	0.23	0.24	0.25	3.57
8. CRUDE PETROLEUM & N. GAS	8.93	9.27	9.60	9.76	9.90	10.37	3.03
9. STONE & CLAY MINING & QUARRYING	0.22	0.22	0.23	0.24	0.24	0.25	2.71
13. ORDNANCE & ACCESSORIES	0.11	0.11	0.11	0.12	0.12	0.12	1.10
20. LUMBER & WOOD PRODUCTS	0.65	0.69	0.71	0.73	0.73	0.72	2.18



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
16. LIFE&PHYSICAL SCIENTISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN
							% GROWTH 82 TO 87
27. CHEMICALS & PRODUCTS	0.88	0.90	0.91	0.92	0.92	0.93	1.01
29. DRUGS, CLEANING & TOILET PREP.	3.43	3.46	3.52	3.57	3.57	3.59	0.92
31. PET REFINING & REL. PROO.	0.49	0.49	0.49	0.50	0.50	0.50	0.30
43. ENGINES & TURBINES	0.12	0.13	0.13	0.13	0.14	0.14	1.75
56. RADIO, TV, & COMMUNICATION EQ.	0.44	0.45	0.47	0.48	0.48	0.49	2.07
60. AIRCRAFT & PARTS	0.33	0.34	0.35	0.36	0.36	0.36	1.99
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.03	1.19
62. INSTRUMENTS & SUPPLIES	0.22	0.22	0.23	0.24	0.25	0.25	2.86
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.16	0.16	0.17	0.17	0.18	0.18	3.16
65. TRANSPORTATION & WAREHOUSING	0.33	0.34	0.35	0.36	0.36	0.36	1.75
68. UTILITIES	0.27	0.27	0.27	0.27	0.27	0.27	-0.26
69. WHOLESALE & RETAIL TRADE	1.92	1.96	2.01	2.05	2.07	2.10	1.86
70. FINANCE & INSURANCE	1.03	1.05	1.08	1.12	1.15	1.19	2.88
73. BUSINESS SERVICES	3.18	3.30	3.44	3.60	3.74	3.86	3.97
77. MISC. SERVICES	12.96	13.12	13.33	13.63	13.97	14.36	2.07
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	12.37	12.51	12.74	13.00	13.25	13.49	1.76
82. GOVERNMENT INDUSTRY	51.51	51.59	52.30	53.48	54.65	55.53	1.51
TOTAL, ALL INDUSTRIES	109.10	110.37	112.35	114.70	116.89	119.04	1.76

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
17. MATHEMATICIANS&STATISTICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.03	0.03	0.03	0.03	0.03	0.03	4.83
13. ORDNANCE & ACCESSORIES	0.08	0.09	0.10	0.10	0.11	0.11	7.62
27. CHEMICALS & PRODUCTS	0.03	0.03	0.03	0.03	0.03	0.04	7.16
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.68
31. PET REFINING & REL. PROD.	0.03	0.03	0.03	0.03	0.03	0.04	5.21
56. RADIO, TV, & COMMUNICATION EQ.	0.56	0.65	0.71	0.82	0.82	0.84	8.28
57. ELECTRONIC COMPONENTS & ACCESS.	0.02	0.02	0.02	0.03	0.03	0.03	11.37
59. MOTOR VEHICLES & EQUIPMENT	0.03	0.04	0.04	0.05	0.06	0.07	17.15
60. AIRCRAFT & PARTS	0.86	0.97	1.07	1.18	1.26	1.30	8.60
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	2.76
62. INSTRUMENTS & SUPPLIES	0.03	0.04	0.04	0.05	0.05	0.05	8.25
65. TRANSPORTATION & WAREHOUSING	0.01	0.01	0.01	0.02	0.02	0.02	4.08
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.01	0.01	0.01	5.81
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	5.95
70. FINANCE & INSURANCE	0.03	0.04	0.04	0.05	0.05	0.05	9.97
73. BUSINESS SERVICES	0.19	0.21	0.23	0.25	0.27	0.28	8.18
77. MISC. SERVICES	0.04	0.04	0.04	0.05	0.05	0.05	4.72
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.05	0.05	0.06	0.06	0.06	0.06	2.41
82. GOVERNMENT INDUSTRY	2.54	2.49	2.53	2.60	2.65	2.66	1.00
TOTAL, ALL INDUSTRIES	4.63	4.84	5.12	5.43	5.65	5.76	4.50
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.36	0.37	0.37	0.36	0.36	0.36	0.02
13. ORDNANCE & ACCESSORIES	0.13	0.13	0.14	0.14	0.14	0.14	1.53
27. CHEMICALS & PRODUCTS	0.53	0.53	0.54	0.54	0.54	0.54	0.67
28. PLASTICS & SYNTHETIC MATLS.	0.31	0.32	0.33	0.34	0.34	0.34	2.29
31. PET REFINING & REL. PROD.	0.51	0.51	0.51	0.51	0.52	0.52	0.28
56. RADIO, TV, & COMMUNICATION EQ.	1.33	1.36	1.41	1.44	1.45	1.48	2.12
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.09	0.09	0.10	0.10	0.10	3.65
59. MOTOR VEHICLES & EQUIPMENT	1.54	1.61	1.67	1.70	1.72	1.72	2.24
60. AIRCRAFT & PARTS	1.72	1.79	1.84	1.89	1.90	1.90	2.00
61. OTHER TRANSPORTATION EQ.	0.07	0.07	0.07	0.07	0.07	0.07	1.36
62. INSTRUMENTS & SUPPLIES	0.29	0.30	0.31	0.32	0.33	0.34	2.79
65. TRANSPORTATION & WAREHOUSING	0.32	0.33	0.33	0.34	0.34	0.34	1.17
66. COMMUNICATION EXC. RADIO & TV	0.44	0.44	0.46	0.47	0.48	0.49	2.09
68. UTILITIES	0.44	0.44	0.44	0.44	0.44	0.44	0.01

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
17. MATHEMATICIANS&STATISTICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
70. FINANCE & INSURANCE	3.97	4.06	4.17	4.30	4.43	4.57	2.85
73. BUSINESS SERVICES	3.87	3.97	4.09	4.23	4.35	4.44	2.81
77. MISC. SERVICES	6.38	6.51	6.66	6.85	7.07	7.31	2.75
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.35	0.35	0.36	0.36	0.37	0.38	1.81
82. GOVERNMENT INDUSTRY	14.55	14.49	14.59	14.81	15.02	15.22	0.90
TOTAL, ALL INDUSTRIES	39.77	40.31	41.07	41.97	42.76	43.50	1.81

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
18. MATHEMATICAL SPECIALISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.01	0.02	0.02	0.02	0.02	0.02	8.13
56. RADIO, TV, & COMMUNICATION EQ.	0.08	0.09	0.10	0.11	0.11	0.12	8.31
60. AIRCRAFT & PARTS	0.04	0.05	0.05	0.06	0.06	0.07	8.67
70. FINANCE & INSURANCE	0.05	0.05	0.06	0.07	0.07	0.08	11.75
77. MISC. SERVICES	0.02	0.02	0.02	0.02	0.03	0.03	5.24
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.26	0.25	0.26	0.27	0.27	0.28	1.40
82. GOVERNMENT INDUSTRY	3.38	3.31	3.36	3.45	3.50	3.52	0.85
TOTAL, ALL INDUSTRIES	3.85	3.80	3.89	4.02	4.09	4.13	1.41
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.02	0.02	0.02	0.02	0.02	0.02	2.01
56. RADIO, TV, & COMMUNICATION EQ.	0.19	0.19	0.20	0.20	0.20	0.21	2.15
60. AIRCRAFT & PARTS	0.09	0.09	0.09	0.10	0.10	0.10	2.07
70. FINANCE & INSURANCE	5.31	5.53	5.78	6.05	6.34	6.62	4.51
77. MISC. SERVICES	3.12	3.20	3.29	3.40	3.53	3.67	3.27
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.06	1.08	1.11	1.14	1.18	1.21	2.75
82. GOVERNMENT INDUSTRY	9.70	9.73	9.87	10.11	10.35	10.51	1.61
TOTAL, ALL INDUSTRIES	20.22	20.60	21.13	21.83	22.53	23.16	2.75
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
19. ENGINEERING&SCIENCE TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.79
4. AGR. FORESTRY & FISHERY SERV.	0.04	0.05	0.05	0.05	0.06	0.06	6.86
5. IRON ORE MINING	0.02	0.02	0.02	0.03	0.03	0.03	7.91
6. NONFERROUS METAL MINING	0.09	0.11	0.12	0.13	0.15	0.15	10.46
7. COAL MINING	0.06	0.07	0.08	0.09	0.10	0.11	10.33
8. CRUDE PETROLEUM & N. GAS	0.64	0.69	0.72	0.77	0.82	0.84	5.38
9. STONE & CLAY MINING & QUARRYING	0.02	0.02	0.03	0.03	0.03	0.03	10.09
10. CHEM & FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.91
11. NEW CONSTRUCTION	1.37	1.57	1.70	1.90	2.06	2.18	9.74
13. DRONANCE & ACCESSORIES	7.95	9.09	10.00	10.92	11.62	12.17	8.89
14. FOOD & KINDRED PRODUCTS	0.07	0.07	0.08	0.08	0.09	0.09	6.12
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.03	0.04	0.04	0.04	5.77
17. MISC. TEXTILE GOODS	0.02	0.02	0.02	0.02	0.02	0.02	7.13
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.67
20. LUMBER & WOOD PRODUCTS	0.09	0.10	0.11	0.12	0.13	0.14	9.66
21. WOOD CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	9.92
23. OTHER FURNITURE & FIXTURES	0.03	0.03	0.03	0.03	0.04	0.04	5.48
24. PAPER & ALLIED PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.08	6.48
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.73
26. PRINTING & PUBLISHING	0.03	0.03	0.04	0.04	0.04	0.04	6.19
27. CHEMICALS & PRODUCTS	1.00	1.11	1.20	1.31	1.42	1.50	8.37
28. PLASTICS & SYNTHETIC MATLS.	0.18	0.20	0.22	0.24	0.26	0.28	9.54
29. DRUGS, CLEANING & TOILET PREP.	0.05	0.05	0.06	0.06	0.06	0.06	5.17
30. PAINTS & ALLIED PRODUCTS	0.06	0.07	0.08	0.09	0.09	0.10	9.50
31. PET REFINING & REL. PROD.	0.27	0.29	0.31	0.33	0.35	0.37	5.93
32. RUBBER & MISC. PLASTICS PROD.	0.24	0.27	0.30	0.34	0.37	0.40	10.70
35. GLASS & GLASS PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.05	8.89
36. STONE & CLAY PRODUCTS	0.15	0.18	0.19	0.21	0.22	0.23	8.51
37. PRIMARY FERROUS METALS	0.49	0.55	0.59	0.65	0.69	0.73	8.27
38. NONFERROUS METALS	0.44	0.51	0.56	0.63	0.68	0.72	10.26
40. FAB. STRUCTURAL METAL PRODUCTS	0.72	0.83	0.89	0.97	1.04	1.11	8.99
41. SCREW MACHINE PROD. & STAMPINGS	0.14	0.16	0.17	0.18	0.20	0.21	8.36
42. OTHER FAB. METAL PRODUCTS	0.23	0.27	0.30	0.34	0.37	0.40	11.04
43. ENGINES & TURBINES	0.29	0.33	0.37	0.39	0.42	0.44	8.70
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.02	9.26
45. CONSTR. & MINING MACHINERY	0.11	0.13	0.14	0.15	0.17	0.17	8.99
46. MATERIALS HANDLING MACH. & EQ.	0.19	0.23	0.25	0.28	0.31	0.33	10.90

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
19. ENGINEERING & SCIENCE TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
47. METALWORKING MACH. & EQ.	0.47	0.55	0.60	0.67	0.73	0.76	9.93
48. SPECIAL INDUSTRY MACHINERY	0.05	0.06	0.07	0.08	0.09	0.09	12.96
49. GENERAL INDUSTRY MACHINERY	0.45	0.51	0.55	0.59	0.84	0.67	8.32
50. MISC. NONELECTRICAL MACH.	0.26	0.28	0.31	0.35	0.37	0.38	8.16
51. OFFICE, COMPUTING & ACCT. MACH.	1.43	1.68	1.85	2.03	2.14	2.23	9.26
52. SERVICE INDUSTRY MACHINES	0.08	0.09	0.10	0.12	0.14	0.18	14.01
53. ELECTRICAL MACHINERY	0.65	0.75	0.83	0.92	1.00	1.05	10.18
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.16	0.18	0.19	0.21	0.23	0.24	9.04
56. RADIO, TV, & COMMUNICATION EQ.	17.44	20.30	22.57	24.75	26.34	27.21	9.31
57. ELECTRONIC COMPONENTS & ACCESS.	6.05	7.28	8.27	9.34	10.27	10.88	12.39
58. MISC. ELECTRICAL MACH. & EQ.	0.10	0.12	0.13	0.14	0.18	0.16	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.20	0.24	0.28	0.33	0.39	0.48	18.17
60. AIRCRAFT & PARTS	12.02	13.66	15.13	16.78	18.03	18.80	9.13
61. OTHER TRANSPORTATION EQ.	1.25	1.32	1.37	1.40	1.45	1.50	3.78
62. INSTRUMENTS & SUPPLIES	3.06	3.48	3.83	4.22	4.53	4.72	9.01
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.29	0.32	0.35	0.39	0.42	0.45	8.68
64. MISC. MANUFACTURING	0.03	0.03	0.04	0.04	0.04	0.04	5.78
65. TRANSPORTATION & WAREHOUSING	0.25	0.28	0.27	0.29	0.30	0.30	4.14
66. COMMUNICATION EXC. RADIO & TV	0.71	0.77	0.82	0.90	0.96	0.99	6.87
67. RADIO & TV BROADCASTING	0.33	0.37	0.39	0.42	0.44	0.46	8.63
68. UTILITIES	0.76	0.83	0.90	0.97	1.03	1.05	6.75
69. WHOLESALE & RETAIL TRADE	0.70	0.80	0.89	1.00	1.09	1.15	10.32
70. FINANCE & INSURANCE	0.01	0.01	0.02	0.02	0.02	0.02	10.66
71. REAL ESTATE & RENTAL	0.02	0.02	0.02	0.02	0.02	0.03	9.02
72. PERSONAL SERVICES EXC. AUTO.	0.80	0.70	0.78	0.88	0.97	1.05	11.87
73. BUSINESS SERVICES	2.88	3.27	3.62	4.03	4.38	4.57	9.68
76. AMUSEMENTS	0.04	0.05	0.05	0.05	0.06	0.06	7.58
77. MISC. SERVICES	1.66	1.71	1.79	1.90	2.00	2.05	4.33
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.57	1.65	1.74	1.84	1.91	1.94	4.39
82. GOVERNMENT INDUSTRY	29.76	29.38	30.14	31.17	31.88	32.29	1.64
TOTAL, ALL INDUSTRIES	98.51	107.92	116.79	126.51	134.10	138.78	7.09
TOTAL EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	3.98	4.00	4.02	4.00	4.00	3.99	0.05
4. AGR., FORESTRY, & FISHERY SERV.	2.30	2.36	2.39	2.44	2.47	2.51	1.76
5. IRON ORE MINING	0.38	0.40	0.43	0.43	0.42	0.41	1.74
8. NONFERROUS METAL MINING	1.61	1.69	1.75	1.79	1.77	1.77	1.92

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
19. ENGINEERING & SCIENCE TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
7. COAL MINING	2.30	2.45	2.58	2.67	2.79	2.88	4.57
8. CRUDE PETROLEUM & N. GAS	8.71	8.80	8.88	8.81	8.78	8.95	0.55
9. STONE & CLAY MINING & QUARRYING	0.67	0.68	0.71	0.74	0.76	0.76	2.68
10. CHEM & FERTILIZER MIN. MINING	0.49	0.51	0.52	0.54	0.54	0.54	2.01
11. NEW CONSTRUCTION	36.52	37.71	38.88	40.52	41.90	42.86	3.25
13. ORONANCE & ACCESSORIES	13.15	13.59	13.97	14.43	14.76	15.05	2.73
14. FOOD & KINDRED PRODUCTS	10.00	10.24	10.40	10.47	10.47	10.49	0.95
16. FABRIC, YARN & THREAD MILLS	2.45	2.53	2.62	2.69	2.73	2.75	2.36
17. MISC. TEXTILE GOODS	1.20	1.25	1.30	1.34	1.36	1.37	2.74
19. MISC. FABRICATED TEXTILE PROO.	0.22	0.23	0.24	0.24	0.24	0.25	1.85
20. LUMBER & WOOD PRODUCTS	4.20	4.58	4.79	5.00	5.08	5.06	3.80
21. WOOD CONTAINERS	0.09	0.09	0.10	0.10	0.10	0.10	1.25
23. OTHER FURNITURE & FIXTURES	1.82	1.85	1.93	2.00	2.06	2.12	3.04
24. PAPER & ALLIED PRODUCTS	3.21	3.30	3.33	3.33	3.33	3.32	0.85
25. PAPERBOARD CONTAINERS & BOXES	0.33	0.34	0.35	0.35	0.36	0.36	1.67
26. PRINTING & PUBLISHING	2.02	2.03	2.04	2.06	2.07	2.08	0.57
27. CHEMICALS & PRODUCTS	20.78	21.34	21.82	22.19	22.47	22.73	1.81
28. PLASTICS & SYNTHETIC MATLS.	7.27	7.60	7.94	8.20	8.38	8.47	3.10
29. DRUGS, CLEANING & TOILET PREP.	14.18	14.42	14.79	15.12	15.27	15.45	1.73
30. PAINTS & ALLIED PRODUCTS	1.19	1.27	1.33	1.39	1.43	1.47	4.21
31. PET REFINING & REL. PROO.	5.09	5.11	5.18	5.26	5.31	5.34	0.96
32. RUBBER & MISC. PLASTICS PROO.	8.77	9.11	9.53	9.87	10.16	10.29	3.25
35. GLASS & GLASS PRODUCTS	1.52	1.54	1.56	1.57	1.55	1.54	0.22
36. STONE & CLAY PRODUCTS	4.79	4.89	4.98	5.12	5.15	5.10	1.26
37. PRIMARY FERROUS METALS	6.84	7.09	7.34	7.46	7.52	7.51	1.87
38. NONFERROUS METALS	5.20	5.44	5.71	5.93	6.07	6.21	3.61
40. FAB. STRUCTURAL METAL PRODUCTS	16.21	16.48	17.11	17.90	18.50	18.96	3.19
41. SCREW MACHINE PROO. & STAMPINGS	2.25	2.38	2.47	2.53	2.56	2.58	2.80
42. OTHER FAB. METAL PRODUCTS	5.11	5.34	5.65	5.89	6.09	6.30	4.26
43. ENGINES & TURBINES	3.49	3.63	3.81	3.88	3.94	3.98	2.71
44. FARM & GARDEN MACHINERY	2.96	3.07	3.27	3.35	3.42	3.49	3.36
45. CONSTR. & MINING MACHINERY	9.58	10.31	11.04	11.62	12.11	12.42	5.33
46. MATERIALS HANDLING MACH. & EQ.	3.42	3.60	3.88	4.11	4.28	4.43	5.31
47. METALWORKING MACH. & EQ.	9.20	9.63	10.26	10.73	11.10	11.36	4.31
48. SPECIAL INDUSTRY MACHINERY	7.07	7.28	7.71	8.12	8.38	8.62	4.04
49. GENERAL INDUSTRY MACHINERY	10.19	10.53	11.11	11.49	11.77	12.04	3.39
50. MISC. NONELECTRICAL MACH.	2.28	2.34	2.45	2.52	2.56	2.60	2.82
51. OFFICE, COMPUTING & ACCT. MACH.	38.06	40.42	42.94	44.50	45.87	47.62	4.58
52. SERVICE INDUSTRY MACHINES	4.46	4.67	4.92	5.03	5.06	5.09	2.68

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
19. ENGINEERING & SCIENCE TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANNUAL % GROWTH 82 TO 87
	82	83	84	85	86	87	
53. ELECTRICAL MACHINERY	13.03	13.41	14.16	14.62	14.92	15.15	3.06
54. HOUSEHOLD APPLIANCES	2.18	2.24	2.30	2.38	2.43	2.48	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	3.30	3.35	3.46	3.57	3.65	3.72	2.44
56. RADIO, TV, & COMMUNICATION EQ.	41.28	42.78	44.62	45.90	46.81	48.08	3.09
57. ELECTRONIC COMPONENTS & ACCESS.	27.64	29.11	30.85	32.39	33.61	34.80	4.60
58. MISC. ELECTRICAL MACH. & EQ.	3.85	3.99	4.14	4.19	4.25	4.28	2.13
59. MOTOR VEHICLES & EQUIPMENT	10.41	10.99	11.47	11.76	11.98	12.15	3.13
60. AIRCRAFT & PARTS	24.07	25.16	25.97	26.92	27.12	27.23	2.50
61. OTHER TRANSPORTATION EQ.	4.30	4.45	4.62	4.74	4.77	4.83	2.38
62. INSTRUMENTS & SUPPLIES	26.33	27.00	28.28	29.59	30.58	31.29	3.51
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	6.73	6.85	7.16	7.50	7.78	8.00	3.50
64. MISC. MANUFACTURING	2.78	2.81	2.90	2.97	3.01	3.03	1.75
65. TRANSPORTATION & WAREHOUSING	5.81	5.92	6.03	6.18	6.19	6.17	1.23
66. COMMUNICATION EXC. RADIO & TV	28.78	29.44	30.59	31.34	32.51	33.23	2.92
67. RADIO & TV BROADCASTING	16.68	16.92	17.12	17.11	17.01	16.92	0.29
68. UTILITIES	35.24	35.55	35.83	36.09	36.38	36.61	0.76
69. WHOLESALE & RETAIL TRADE	115.21	119.75	124.31	128.31	131.62	135.05	3.23
70. FINANCE & INSURANCE	1.50	1.55	1.61	1.67	1.74	1.80	3.68
71. REAL ESTATE & RENTAL	0.61	0.63	0.64	0.66	0.68	0.69	2.61
72. PERSONAL SERVICES EXC. AUTO.	32.55	34.28	36.17	38.07	39.97	41.79	5.12
73. BUSINESS SERVICES	59.34	61.86	64.67	67.85	70.65	73.01	4.23
76. AMUSEMENTS	4.28	4.31	4.39	4.46	4.54	4.60	1.45
77. MISC. SERVICES	257.22	261.34	266.19	272.93	280.65	289.20	2.37
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	15.79	16.18	16.87	17.15	17.57	17.98	2.63
82. GOVERNMENT INDUSTRY	228.12	228.21	230.87	235.12	239.40	243.80	1.34
TOTAL, ALL INDUSTRIES	1,257.28	1,288.97	1,327.85	1,366.08	1,399.81	1,431.80	2.63

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
20. CIVIL ENGINEERING TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
77. MISC. SERVICES	0.18	0.18	0.19	0.20	0.21	0.22	4.52
TOTAL, ALL INDUSTRIES	0.18	0.18	0.19	0.20	0.22	0.22	4.53
TOTAL EMPLOYMENT							
77. MISC. SERVICES	27.39	27.88	28.45	29.23	30.11	31.08	2.56
TOTAL, ALL INDUSTRIES	27.48	27.98	28.55	29.33	30.21	31.18	2.56
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
21. DRAFTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.01	0.01	0.01	0.01	0.01	0.01	6.85
6. NONFERROUS METAL MINING	0.02	0.03	0.03	0.03	0.03	0.04	10.39
7. COAL MINING	0.02	0.03	0.03	0.03	0.04	0.04	11.46
8. CRUDE PETROLEUM & N. GAS	0.22	0.24	0.25	0.27	0.28	0.29	5.94
11. NEW CONSTRUCTION	0.71	0.81	0.88	0.98	1.07	1.13	9.86
13. ORDNANCE & ACCESSORIES	1.10	1.26	1.38	1.51	1.61	1.69	8.93
20. LUMBER & WOOD PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.06	12.64
23. OTHER FURNITURE & FIXTURES	0.02	0.03	0.03	0.03	0.03	0.03	5.71
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	6.43
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.01	0.01	0.01	6.73
27. CHEMICALS & PRODUCTS	0.08	0.09	0.10	0.11	0.11	0.12	7.61
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.03	0.03	0.03	0.03	8.71
31. PET REFINING & REL. PROD.	0.04	0.04	0.04	0.04	0.05	0.05	5.28
32. RUBBER & MISC. PLASTICS PROD.	0.04	0.04	0.05	0.05	0.06	0.06	10.54
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	9.93
36. STONE & CLAY PRODUCTS	0.08	0.08	0.07	0.08	0.08	0.09	9.87
37. PRIMARY FERROUS METALS	0.12	0.13	0.15	0.18	0.17	0.18	8.45
38. NONFERROUS METALS	0.11	0.12	0.14	0.15	0.16	0.17	9.57
40. FAB. STRUCTURAL METAL PRODUCTS	0.59	0.68	0.74	0.80	0.86	0.92	9.16
41. SCREW MACHINE PROD. & STAMPINGS	0.07	0.08	0.09	0.10	0.11	0.11	8.91
42. OTHER FAB. METAL PRODUCTS	0.14	0.17	0.19	0.21	0.23	0.24	11.15
43. ENGINES & TURBINES	0.09	0.10	0.11	0.12	0.13	0.14	8.18
45. CONSTR. & MINING MACHINERY	0.07	0.08	0.08	0.09	0.10	0.10	9.42
46. MATERIALS HANDLING MACH. & EQ.	0.11	0.13	0.15	0.17	0.18	0.19	11.33
47. METALWORKING MACH. & EQ.	0.31	0.36	0.39	0.44	0.48	0.50	10.09
48. SPECIAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.05	0.05	0.06	13.00
49. GENERAL INDUSTRY MACHINERY	0.22	0.25	0.27	0.29	0.31	0.33	8.25
50. MISC. NONELECTRICAL MACH.	0.17	0.18	0.21	0.23	0.24	0.25	8.50
51. OFFICE, COMPUTING & ACCT. MACH.	0.17	0.20	0.22	0.24	0.25	0.26	8.11
52. SERVICE INDUSTRY MACHINES	0.04	0.05	0.06	0.07	0.08	0.09	14.51
53. ELECTRICAL MACHINERY	0.24	0.27	0.30	0.33	0.36	0.38	10.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.06	0.07	0.08	0.08	0.09	0.10	10.29
56. RADIO, TV, & COMMUNICATION EQ.	2.88	3.35	3.72	4.08	4.34	4.48	9.21
57. ELECTRONIC COMPONENTS & ACCESS.	0.68	0.82	0.93	1.08	1.16	1.23	12.56
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.03	0.03	0.03	0.03	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.05	0.06	0.07	0.08	0.09	0.11	18.74
60. AIRCRAFT & PARTS	1.93	2.19	2.41	2.68	2.84	2.92	8.59

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
21. DRAFTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
61. OTHER TRANSPORTATION EQ.	0.77	0.82	0.85	0.88	0.91	0.94	4.10
62. INSTRUMENTS & SUPPLIES	0.71	0.81	0.89	0.99	1.07	1.12	9.53
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.08	0.07	0.08	0.08	0.09	0.10	9.80
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	4.89
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.03	0.03	0.04	3.66
66. COMMUNICATION EXC. RADIO & TV	0.13	0.14	0.15	0.16	0.17	0.18	5.59
68. UTILITIES	0.27	0.30	0.32	0.34	0.36	0.37	6.70
69. WHOLESALE & RETAIL TRADE	0.04	0.05	0.06	0.07	0.08	0.09	14.15
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.02	0.02	9.05
72. PERSONAL SERVICES EXC. AUTO.	0.02	0.02	0.02	0.03	0.03	0.03	12.01
73. BUSINESS SERVICES	0.87	1.00	1.11	1.25	1.36	1.43	10.50
77. MISC. SERVICES	0.72	0.74	0.77	0.82	0.86	0.88	4.11
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.31	0.34	0.36	0.38	0.40	0.41	5.85
82. GOVERNMENT INDUSTRY	1.05	1.03	1.06	1.10	1.13	1.15	1.85
TOTAL, ALL INDUSTRIES	15.56	17.50	19.12	20.92	22.36	23.30	8.40

TOTAL EMPLOYMENT

4. AGR., FORESTRY, & FISHERY SERV.	0.35	0.36	0.37	0.37	0.38	0.39	1.76
6. NONFERROUS METAL MINING	0.37	0.39	0.41	0.41	0.41	0.41	1.86
7. COAL MINING	0.84	0.90	0.96	1.01	1.06	1.10	5.64
8. CRUDE PETROLEUM & N. GAS	2.95	3.00	3.05	3.04	3.04	3.12	1.08
11. NEW CONSTRUCTION	18.82	19.45	20.08	20.95	21.68	22.20	3.36
13. ORNANCE & ACCESSORIES	1.82	1.88	1.93	2.00	2.04	2.08	2.77
20. LUMBER & WOOD PRODUCTS	1.58	1.78	1.91	2.05	2.14	2.18	6.63
23. OTHER FURNITURE & FIXTURES	1.51	1.54	1.61	1.68	1.73	1.78	3.27
24. PAPER & ALLIED PRODUCTS	0.63	0.64	0.65	0.65	0.65	0.65	0.61
26. PRINTING & PUBLISHING	0.62	0.63	0.64	0.65	0.65	0.66	1.08
27. CHEMICALS & PRODUCTS	1.72	1.78	1.78	1.80	1.81	1.82	1.10
28. PLASTICS & SYNTHETIC MATLS.	0.90	0.94	0.97	1.00	1.01	1.01	2.31
31. PET REFINING & REL. PROO.	0.89	0.89	0.70	0.70	0.71	0.71	0.32
32. RUBBER & MISC. PLASTICS PROO.	1.41	1.46	1.53	1.58	1.62	1.64	3.09
35. GLASS & GLASS PRODUCTS	0.43	0.44	0.45	0.46	0.46	0.46	1.18
36. STONE & CLAY PRODUCTS	1.72	1.78	1.84	1.91	1.94	1.95	2.53
37. PRIMARY FERROUS METALS	1.67	1.74	1.80	1.83	1.85	1.85	2.04
38. NONFERROUS METALS	1.28	1.33	1.39	1.44	1.46	1.49	2.97
40. FAB. STRUCTURAL METAL PRODUCTS	13.30	13.54	14.08	14.76	15.28	15.66	3.34
41. SCREW MACHINE PROO. & STAMPINGS	1.21	1.29	1.35	1.39	1.41	1.43	3.31
42. OTHER FAB. METAL PRODUCTS	3.13	3.28	3.47	3.62	3.75	3.88	4.36

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
21. DRAFTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
43. ENGINES & TURBINES	1.10	1.14	1.18	1.20	1.21	1.22	2.21
45. CONSTR. & MINING MACHINERY	5.61	6.07	6.52	6.89	7.21	7.42	5.75
46. MATERIALS HANDLING MACH. & EQ.	2.00	2.12	2.29	2.44	2.55	2.65	5.73
47. METALWORKING MACH. & EQ.	6.00	6.29	6.71	7.03	7.28	7.46	4.46
48. SPECIAL INDUSTRY MACHINERY	4.30	4.43	4.69	4.94	5.11	5.25	4.09
49. GENERAL INDUSTRY MACHINERY	5.05	5.21	5.50	5.68	5.82	5.95	3.33
50. MISC. NONELECTRICAL MACH.	1.47	1.52	1.80	1.65	1.68	1.72	3.14
51. OFFICE, COMPUTING & ACCT. MACH.	4.60	4.83	5.07	5.20	5.31	5.46	3.49
52. SERVICE INDUSTRY MACHINES	2.47	2.80	2.75	2.82	2.88	2.88	3.13
53. ELECTRICAL MACHINERY	4.73	4.86	5.13	5.29	5.39	5.47	2.94
55. ELECTRIC LIGHTING & WIRING EQ.	1.28	1.30	1.36	1.42	1.46	1.50	3.81
56. RADIO, TV, & COMMUNICATION EQ.	6.83	7.06	7.36	7.57	7.71	7.91	3.00
57. ELECTRONIC COMPONENTS & ACCESS.	3.11	3.28	3.48	3.66	3.80	3.92	4.75
58. MISC. ELECTRICAL MACH. & EQ.	0.75	0.77	0.80	0.81	0.82	0.83	2.12
59. MOTOR VEHICLES & EQUIPMENT	2.43	2.58	2.71	2.79	2.85	2.90	3.82
60. AIRCRAFT & PARTS	3.87	4.03	4.14	4.27	4.28	4.27	2.00
61. OTHER TRANSPORTATION EQ.	2.68	2.77	2.89	2.97	3.00	3.04	2.68
62. INSTRUMENTS & SUPPLIES	6.08	6.27	6.60	6.94	7.20	7.40	4.00
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.42	1.45	1.53	1.62	1.69	1.75	4.37
64. MISC. MANUFACTURING	0.98	0.98	1.00	1.02	1.02	1.02	0.89
65. TRANSPORTATION & WAREHOUSING	0.69	0.70	0.71	0.73	0.72	0.72	0.78
66. COMMUNICATION EXC. RADIO & TV	5.40	5.46	5.61	5.69	5.85	5.92	1.87
68. UTILITIES	12.49	12.59	12.68	12.77	12.87	12.94	0.72
69. WHOLESALE & RETAIL TRADE	7.17	7.76	8.36	8.93	9.45	9.97	6.81
71. REAL ESTATE & RENTAL	0.38	0.39	0.40	0.41	0.42	0.43	2.64
72. PERSONAL SERVICES EXC. AUTO.	1.01	1.07	1.13	1.19	1.25	1.31	5.26
73. BUSINESS SERVICES	17.93	18.86	19.87	21.00	22.02	22.80	5.02
77. MISC. SERVICES	111.22	112.74	114.58	117.23	120.30	123.72	2.15
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	5.34	5.48	5.86	5.84	6.00	6.15	2.87
82. GOVERNMENT INDUSTRY	16.87	16.82	16.95	17.17	17.39	17.69	0.95
TOTAL, ALL INDUSTRIES	306.81	315.00	325.11	335.42	344.64	353.38	2.87

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
22. ELECTRICAL/ELECTRONIC TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.06	0.06	0.06	0.07	0.07	0.07	4.19
11. NEW CONSTRUCTION	0.46	0.52	0.57	0.64	0.69	0.74	10.02
13. ORONANCE & ACCESSORIES	2.89	3.31	3.65	3.99	4.25	4.46	9.05
26. PRINTING & PUBLISHING	0.01	0.02	0.02	0.02	0.02	0.02	6.49
27. CHEMICALS & PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05	7.63
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.02	8.70
31. PET REFINING & REL. PROO.	0.02	0.02	0.02	0.03	0.03	0.03	5.24
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.09
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.05	0.05	0.05	6.98
38. NONFERROUS METALS	0.05	0.06	0.07	0.07	0.08	0.08	9.94
40. FAB. STRUCTURAL METAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.03	7.74
42. OTHER FAB. METAL PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	10.03
43. ENGINES & TURBINES	0.03	0.04	0.04	0.05	0.05	0.05	9.14
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.13
47. METALWORKING MACH. & EQ.	0.07	0.07	0.08	0.09	0.10	0.10	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.06
49. GENERAL INDUSTRY MACHINERY	0.05	0.06	0.06	0.07	0.07	0.07	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	1.16	1.36	1.51	1.65	1.75	1.83	9.45
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.02	0.02	0.02	13.37
53. ELECTRICAL MACHINERY	0.27	0.31	0.34	0.38	0.41	0.44	10.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.07	8.24
56. RADIO, TV, & COMMUNICATION EQ.	11.22	13.06	14.52	15.93	16.95	17.52	9.31
57. ELECTRONIC COMPONENTS & ACCESS.	3.83	4.60	5.24	5.91	6.51	6.88	12.43
58. MISC. ELECTRICAL MACH. & EQ.	0.04	0.05	0.05	0.06	0.06	0.06	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.02	0.02	0.02	17.13
60. AIRCRAFT & PARTS	2.28	2.60	2.89	3.22	3.48	3.60	9.57
61. OTHER TRANSPORTATION EQ.	0.10	0.10	0.11	0.11	0.11	0.12	3.40
62. INSTRUMENTS & SUPPLIES	1.42	1.60	1.76	1.93	2.07	2.15	8.69
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.09	0.10	0.11	0.12	0.13	0.14	8.59
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.22
65. TRANSPORTATION & WAREHOUSING	0.16	0.16	0.17	0.18	0.19	0.19	4.60
66. COMMUNICATION EXC. RADIO & TV	0.45	0.48	0.52	0.57	0.61	0.64	7.19
67. RADIO & TV BROADCASTING	0.04	0.04	0.05	0.05	0.06	0.06	10.41
68. UTILITIES	0.24	0.27	0.29	0.31	0.33	0.34	7.03
69. WHOLESALE & RETAIL TRADE	0.63	0.72	0.80	0.89	0.97	1.02	10.10

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
22. ELECTRICAL & ELECTRONIC TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
72. PERSONAL SERVICES EXC. AUTO.	0.56	0.65	0.73	0.83	0.91	0.98	11.95
73. BUSINESS SERVICES	1.12	1.28	1.43	1.60	1.75	1.84	10.55
76. AMUSEMENTS	0.01	0.01	0.01	0.01	0.01	0.02	7.94
77. MISC. SERVICES	0.10	0.10	0.10	0.11	0.11	0.12	3.74
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.16	0.17	0.19	0.20	0.20	0.21	5.21
82. GOVERNMENT INDUSTRY	9.08	8.96	9.19	9.50	9.71	9.83	1.60
TOTAL, ALL INDUSTRIES	36.86	41.11	44.90	48.93	52.06	54.00	7.94
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.77	0.77	0.77	0.75	0.74	0.75	-0.59
11. NEW CONSTRUCTION	12.16	12.59	13.02	13.60	14.09	14.45	3.51
13. ORDNANCE & ACCESSORIES	4.76	4.95	5.10	5.27	5.40	5.51	2.68
26. PRINTING & PUBLISHING	0.94	0.95	0.96	0.97	0.97	0.98	0.85
27. CHEMICALS & PRODUCTS	0.73	0.75	0.76	0.77	0.77	0.78	1.11
28. PLASTICS & SYNTHETIC MATLS.	0.43	0.44	0.46	0.47	0.47	0.46	2.31
31. PET REFINING & REL. PROD.	0.40	0.40	0.40	0.40	0.40	0.40	0.30
35. GLASS & GLASS PRODUCTS	0.28	0.28	0.28	0.28	0.28	0.27	-0.51
37. PRIMARY FERROUS METALS	0.63	0.64	0.66	0.66	0.66	0.65	0.66
38. NONFERROUS METALS	0.62	0.65	0.68	0.70	0.72	0.73	3.31
40. FAB. STRUCTURAL METAL PRODUCTS	0.39	0.39	0.40	0.41	0.42	0.43	2.00
42. OTHER FAB. METAL PRODUCTS	0.31	0.32	0.33	0.34	0.35	0.36	3.31
43. ENGINES & TURBINES	0.41	0.43	0.45	0.46	0.47	0.47	3.12
45. CONSTR. & MINING MACHINERY	0.57	0.60	0.64	0.66	0.68	0.68	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.20	0.21	0.22	0.23	0.24	0.24	3.63
47. METALWORKING MACH. & EQ.	1.27	1.32	1.40	1.45	1.50	1.52	3.76
48. SPECIAL INDUSTRY MACHINERY	1.17	1.20	1.26	1.31	1.34	1.37	3.21
49. GENERAL INDUSTRY MACHINERY	1.19	1.22	1.28	1.31	1.33	1.35	2.62
50. MISC. NONELECTRICAL MACH.	0.20	0.20	0.21	0.22	0.22	0.22	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	30.89	32.87	34.96	36.32	37.49	38.98	4.76
52. SERVICE INDUSTRY MACHINES	0.59	0.62	0.65	0.66	0.66	0.66	2.11
53. ELECTRICAL MACHINERY	5.40	5.55	5.66	5.85	6.17	6.27	3.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.92	0.93	0.95	0.98	0.99	1.00	1.69
56. RADIO, TV, & COMMUNICATION EQ.	26.57	27.52	28.72	29.54	30.13	30.95	3.10
57. ELECTRONIC COMPONENTS & ACCESS.	17.48	18.42	19.53	20.51	21.29	21.93	4.63
58. MISC. ELECTRICAL MACH. & EQ.	1.46	1.54	1.60	1.62	1.64	1.65	2.13
59. MOTOR VEHICLES & EQUIPMENT	0.46	0.50	0.52	0.53	0.53	0.54	2.22
60. AIRCRAFT & PARTS	4.56	4.79	4.97	5.17	5.23	5.27	2.91
61. OTHER TRANSPORTATION EQ.	0.34	0.35	0.36	0.37	0.37	0.37	1.99

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
22. ELECTRICAL & ELECTRONIC TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
62. INSTRUMENTS & SUPPLIES	12.17	12.44	12.98	13.55	13.96	14.25	3.20
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.16	2.19	2.29	2.39	2.47	2.54	3.23
64. MISC. MANUFACTURING	0.75	0.76	0.79	0.81	0.82	0.83	2.18
65. TRANSPORTATION & WAREHOUSING	3.66	3.75	3.83	3.93	3.96	3.97	1.68
66. COMMUNICATION EXC. RADIO & TV	18.09	18.60	19.42	20.00	20.84	21.40	3.42
67. RADIO & TV BROADCASTING	1.81	1.91	2.00	2.07	2.13	2.18	3.85
68. UTILITIES	11.18	11.31	11.42	11.54	11.66	11.76	1.03
69. WHOLESALE & RETAIL TRADE	103.21	107.04	110.89	114.24	116.98	119.82	3.03
72. PERSONAL SERVICES EXC. AUTO.	30.48	32.12	33.92	35.73	37.54	39.28	5.20
73. BUSINESS SERVICES	23.01	24.22	25.53	26.99	28.31	29.46	5.07
76. AMUSEMENTS	1.07	1.08	1.11	1.13	1.15	1.17	1.79
77. MISC. SERVICES	14.93	15.08	15.27	15.57	15.92	16.32	1.79
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.49	1.54	1.60	1.66	1.71	1.75	3.31
82. GOVERNMENT INDUSTRY	41.40	41.58	42.26	43.29	44.32	45.21	1.78
TOTAL, ALL INDUSTRIES	382.81	396.28	412.01	426.24	438.68	450.55	3.31

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
23. INDUSTRIAL ENGINEERING TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INOUCED EMPLOYMENT							7
13. ORONANCE & ACCESSORIES	0.24	0.27	0.29	0.31	0.33	0.34	7.36
27. CHEMICALS & PRODOCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.18
31. PET REFINING & REL. PROO.	0.01	0.01	0.01	0.01	0.01	0.01	5.19
32. RUBBER & MISC. PLASTICS PROO.	0.02	0.02	0.03	0.03	0.03	0.03	11.25
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.41
37. PRIMARY FERROUS METALS	0.09	0.10	0.11	0.12	0.13	0.13	7.61
38. NONFERROUS METALS	0.02	0.02	0.02	0.03	0.03	0.03	9.26
40. FAB. STRUCTURAL METAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	8.06
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	10.01
43. ENGINES & TURBINES	0.02	0.02	0.03	0.03	0.03	0.03	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	8.91
46. MATERIALS HANOLING MACH. & EQ.	0.02	0.02	0.02	0.03	0.03	0.03	10.81
47. METALWORKING MACH. & EQ.	0.04	0.04	0.05	0.05	0.06	0.06	10.58
49. GENERAL INDUSTRY MACHINERY	0.04	0.04	0.04	0.05	0.05	0.06	9.31
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.03	0.03	0.04	0.04	0.04	0.05	9.13
53. ELECTRICAL MACHINERY	0.04	0.05	0.06	0.06	0.07	0.07	10.78
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.02	0.02	8.22
56. RADIO, TV, & COMMUNICATION EQ.	0.44	0.51	0.57	0.63	0.67	0.70	9.78
57. ELECTRONIC COMPONENTS & ACCESS.	0.09	0.10	0.12	0.13	0.14	0.15	11.36
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.02	0.02	0.02	0.03	18.69
60. AIRCRAFT & PARTS	0.60	0.69	0.76	0.85	0.91	0.94	9.34
61. OTHER TRANSPORTATION EQ.	0.12	0.13	0.13	0.13	0.14	0.14	3.09
62. INSTRUMENTS & SUPPLIES	0.07	0.08	0.09	0.10	0.11	0.11	9.57
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.51
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.02	5.83
73. BUSINESS SERVICES	0.05	0.06	0.06	0.06	0.07	0.07	6.88
77. MISC. SERVICES	0.03	0.03	0.03	0.03	0.03	0.03	4.93
82. GOVERNMENT INDUSTRY	2.15	2.12	2.17	2.23	2.28	2.30	1.34
TOTAL, ALL INDUSTRIES	4.28	4.54	4.83	5.15	5.40	5.55	5.33
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.39	0.40	0.40	0.41	0.42	0.42	1.28
27. CHEMICALS & PRODOCTS	0.14	0.14	0.14	0.14	0.14	0.14	0.69
31. PET REFINING & REL. PROO.	0.12	0.12	0.12	0.12	0.12	0.12	0.25
32. RUBBER & MISC. PLASTICS PROO.	0.74	0.78	0.82	0.85	0.88	0.89	3.76



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OFFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
23. INDUSTRIAL ENGINEERING TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
36. STONE & CLAY PRODUCTS	0.21	0.21	0.21	0.22	0.22	0.22	1.17
37. PRIMARY FERROUS METALS	1.27	1.31	1.35	1.36	1.36	1.36	1.25
38. NONFERROUS METALS	0.23	0.24	0.25	0.26	0.26	0.26	2.67
40. FAB. STRUCTURAL METAL PRODUCTS	0.35	0.35	0.36	0.37	0.38	0.39	2.30
42. QTHER FAB. METAL PRODUCTS	0.24	0.25	0.26	0.27	0.28	0.28	3.30
43. ENGINES & TURBINES	0.26	0.27	0.28	0.28	0.28	0.28	1.77
45. CONSTR. & MINING MACHINERY	0.90	0.96	1.03	1.08	1.13	1.16	5.25
46. MATERIALS HANDLING MACH. & EQ.	0.32	0.34	0.36	0.38	0.40	0.41	5.23
47. METALWORKING MACH. & EQ.	0.71	0.75	0.81	0.85	0.88	0.91	4.92
49. GENERAL INDUSTRY MACHINERY	0.81	0.85	0.91	0.95	0.98	1.01	4.34
50. MISC. NONELECTRICAL MACH.	0.19	0.20	0.21	0.21	0.21	0.22	2.23
51. OFFICE COMPUTING & ACCT. MACH.	0.79	0.83	0.88	0.91	0.94	0.98	4.46
53. ELECTRICAL MACHINERY	0.89	0.92	0.98	1.02	1.04	1.07	3.62
55. ELECTRIC LIGHTING & WIRING EQ.	0.23	0.23	0.23	0.24	0.24	0.25	1.68
56. RADIO, TV, & COMMUNICATION EQ.	1.03	1.07	1.13	1.16	1.19	1.23	3.54
57. ELECTRONIC COMPONENTS & ACCESS.	0.40	0.41	0.44	0.45	0.47	0.48	3.64
59. MOTOR VEHICLES & EQUIPMENT	0.62	0.65	0.68	0.70	0.72	0.73	3.58
60. AIRCRAFT & PARTS	1.21	1.27	1.31	1.36	1.38	1.38	2.70
61. OTHER TRANSPORTATION EQ.	0.42	0.43	0.44	0.45	0.45	0.45	1.68
62. INSTRUMENTS & SUPPLIES	0.63	0.65	0.68	0.71	0.74	0.76	4.04
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.14	0.14	0.15	0.15	0.16	0.16	3.15
68. UTILITIES	0.53	0.53	0.53	0.53	0.53	0.52	-0.11
73. BUSINESS SERVICES	1.03	1.05	1.06	1.09	1.11	1.12	1.57
77. MISC. SERVICES	4.13	4.23	4.33	4.47	4.62	4.78	2.96
82. GOVERNMENT INDUSTRY	6.83	6.81	6.86	6.96	7.07	7.17	0.99
TOTAL, ALL INDUSTRIES	30.24	31.00	32.02	32.89	33.58	34.20	2.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
24. MECHANICAL ENGINEERING TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.42	1.63	1.81	1.98	2.12	2.23	9.54
27. CHEMICALS & PRODUCTS	0.17	0.19	0.20	0.22	0.24	0.26	9.20
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.69
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	8.32
37. PRIMARY FERROUS METALS	0.02	0.02	0.02	0.03	0.03	0.03	8.32
38. NONFERROUS METALS	0.03	0.03	0.04	0.04	0.05	0.05	9.53
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05	7.60
41. SCREW MACHINE PROD.&STAMPINGS	0.01	0.01	0.02	0.02	0.02	0.02	7.72
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	10.12
43. ENGINES & TURBINES	0.06	0.07	0.07	0.08	0.08	0.09	9.11
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	8.19
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.04	0.04	0.05	0.05	0.05	10.08
47. METALWORKING MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.35
49. GENERAL INDUSTRY MACHINERY	0.08	0.09	0.10	0.11	0.12	0.13	9.07
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.07	0.08	0.09	0.09	0.10	0.10	8.95
52. SERVICE INDUSTRY MACHINES	0.01	0.02	0.02	0.02	0.02	0.02	13.36
53. ELECTRICAL MACHINERY	0.04	0.05	0.05	0.06	0.06	0.07	9.12
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.02	0.02	0.02	0.02	0.02	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.15	1.35	1.51	1.66	1.77	1.83	9.72
57. ELECTRONIC COMPONENTS & ACCESS.	0.33	0.39	0.45	0.51	0.56	0.60	12.86
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.02	0.02	0.02	0.02	9.55
59. MOTOR VEHICLES & EQUIPMENT	0.05	0.06	0.07	0.09	0.10	0.12	18.20
60. AIRCRAFT & PARTS	3.68	4.20	4.66	5.18	5.58	5.76	9.36
61. OTHER TRANSPORTATION EQ.	0.06	0.07	0.07	0.07	0.07	0.07	3.30
62. INSTRUMENTS & SUPPLIES	0.23	0.26	0.28	0.31	0.34	0.35	8.95
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.03	0.03	0.04	0.04	0.04	8.64
73. BUSINESS SERVICES	0.20	0.22	0.24	0.26	0.28	0.29	7.95
77. MISC. SERVICES	0.02	0.02	0.02	0.02	0.02	0.02	4.94
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.02	0.02	0.02	5.81
82. GOVERNMENT INDUSTRY	0.03	0.03	0.03	0.03	0.03	0.03	1.02
TOTAL. ALL INDUSTRIES	7.92	9.08	10.06	11.13	11.97	12.47	9.51
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	2.34	2.44	2.52	2.62	2.69	2.76	3.35
27. CHEMICALS & PRODUCTS	3.46	3.58	3.69	3.78	3.86	3.93	2.59

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
24. MECHANICAL ENGINEERING TECHNICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
28. PLASTICS & SYNTHETIC MATLS.	0.34	0.35	0.36	0.37	0.38	0.38	2.29
36. STONE & CLAY PRODUCTS	0.34	0.34	0.35	0.36	0.36	0.36	1.08
37. PRIMARY FERROUS METALS	0.27	0.28	0.29	0.29	0.29	0.29	1.92
38. NONFERROUS METALS	0.35	0.37	0.38	0.40	0.40	0.41	2.92
40. FAB. STRUCTURAL METAL PRODUCTS	0.84	0.84	0.86	0.89	0.90	0.92	1.86
41. SCREW MACHINE PROD. & STAMPINGS	0.21	0.22	0.22	0.23	0.23	0.23	2.19
42. OTHER FAB. METAL PRODUCTS	0.39	0.40	0.42	0.44	0.45	0.46	3.40
43. ENGINES & TURBINES	0.69	0.73	0.76	0.78	0.80	0.81	3.10
45. CONSTR. & MINING MACHINERY	1.57	1.68	1.78	1.86	1.93	1.97	4.55
46. MATERIALS HANDLING MACH. & EQ.	0.56	0.59	0.63	0.66	0.68	0.70	4.53
47. METALWORKING MACH. & EQ.	0.51	0.54	0.57	0.59	0.61	0.62	3.75
49. GENERAL INDUSTRY MACHINERY	1.90	1.98	2.10	2.19	2.25	2.32	4.10
50. MISC. NONELECTRICAL MACH.	0.19	0.19	0.20	0.20	0.21	0.21	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	1.78	1.88	1.99	2.06	2.12	2.19	4.29
52. SERVICE INDUSTRY MACHINES	0.73	0.76	0.80	0.81	0.81	0.81	2.10
53. ELECTRICAL MACHINERY	0.88	0.89	0.93	0.96	0.97	0.97	2.06
55. ELECTRIC LIGHTING & WIRING EQ.	0.29	0.30	0.30	0.31	0.32	0.32	1.70
56. RADIO, TV, & COMMUNICATION EQ.	2.73	2.84	2.98	3.07	3.15	3.24	3.48
57. ELECTRONIC COMPONENTS & ACCESS.	1.48	1.57	1.67	1.76	1.84	1.90	5.04
58. MISC. ELECTRICAL MACH. & EQ.	0.45	0.47	0.48	0.49	0.50	0.50	2.11
59. MOTOR VEHICLES & EQUIPMENT	2.74	2.89	3.02	3.09	3.16	3.20	3.16
60. AIRCRAFT & PARTS	7.38	7.73	8.00	8.31	8.39	8.44	2.72
61. OTHER TRANSPORTATION EQ.	0.21	0.22	0.23	0.23	0.23	0.24	1.89
62. INSTRUMENTS & SUPPLIES	1.95	2.00	2.10	2.19	2.26	2.32	3.46
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.65	0.66	0.68	0.72	0.74	0.76	3.27
73. BUSINESS SERVICES	4.06	4.16	4.28	4.42	4.53	4.62	2.59
77. MISC. SERVICES	2.56	2.61	2.68	2.76	2.86	2.96	2.97
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.07	0.07	0.07	0.08	0.08	0.08	3.08
82. GOVERNMENT INDUSTRY	1.12	1.12	1.14	1.18	1.21	1.23	2.05
TOTAL, ALL INDUSTRIES	44.83	46.53	48.41	50.06	51.19	52.16	3.08

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
25. ENGINEERING&SCIENCE TECH NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.79
4. AGR., FORESTRY, & FISHERY SERV.	0.04	0.04	0.04	0.04	0.05	0.05	6.86
5. IRON ORE MINING	0.02	0.02	0.02	0.02	0.02	0.02	7.83
6. NONFERROUS METAL MINING	0.07	0.08	0.09	0.10	0.11	0.12	10.48
7. COAL MINING	0.04	0.05	0.05	0.06	0.06	0.07	9.67
8. CRUDE PETROLEUM & N. GAS	0.37	0.40	0.41	0.44	0.47	0.47	5.23
9. STONE & CLAY MINING & QUARRYING	0.02	0.02	0.02	0.02	0.03	0.03	10.17
10. CHEM & FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.89
11. NEW CONSTRUCTION	0.21	0.24	0.25	0.28	0.30	0.32	8.71
13. ORNANCE & ACCESSORIES	2.31	2.62	2.87	3.12	3.31	3.46	8.43
14. FOOD & KINDRED PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.08	6.18
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.03	0.04	0.04	0.04	5.79
17. MISC. TEXTILE GOODS	0.02	0.02	0.02	0.02	0.02	0.02	7.13
20. LUMBER & WOOD PRODUCTS	0.05	0.06	0.06	0.07	0.07	0.08	7.67
24. PAPER & ALLIED PRODUCTS	0.05	0.05	0.05	0.06	0.06	0.06	6.50
27. CHEMICALS & PRODUCTS	0.71	0.79	0.85	0.93	1.00	1.06	8.31
28. PLASTICS & SYNTHETIC MATLS.	0.13	0.15	0.17	0.19	0.20	0.21	9.80
29. DRUGS, CLEANING & TOILET PREP.	0.05	0.05	0.05	0.06	0.06	0.06	5.23
30. PAINTS & ALLIED PRODUCTS	0.06	0.07	0.07	0.08	0.09	0.09	9.59
31. PET REFINING & REL. PROD.	0.21	0.22	0.23	0.25	0.27	0.28	6.15
32. RUBBER & MISC. PLASTICS PROD.	0.18	0.20	0.23	0.25	0.28	0.30	10.68
35. GLASS & GLASS PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	8.74
36. STONE & CLAY PRODUCTS	0.08	0.09	0.09	0.10	0.11	0.11	7.65
37. PRIMARY FERROUS METALS	0.21	0.24	0.26	0.29	0.31	0.32	8.70
38. NONFERROUS METALS	0.23	0.27	0.30	0.33	0.36	0.38	10.83
40. FAB. STRUCTURAL METAL PRODUCTS	0.06	0.07	0.07	0.08	0.09	0.09	8.83
41. SCREW MACHINE PROD. & STAMPINGS	0.04	0.05	0.05	0.06	0.06	0.06	7.71
42. OTHER FAB. METAL PRODUCTS	0.05	0.06	0.06	0.07	0.08	0.08	11.60
43. ENGINES & TURBINES	0.09	0.10	0.11	0.12	0.13	0.13	9.04
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	8.85
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.03	0.03	0.03	10.75
47. METALWORKING MACH. & EQ.	0.04	0.04	0.05	0.05	0.05	0.06	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	14.74
49. GENERAL INDUSTRY MACHINERY	0.05	0.06	0.07	0.07	0.08	0.08	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.03	0.03	0.03	0.03	0.04	7.51
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.01	13.37
53. ELECTRICAL MACHINERY	0.06	0.07	0.07	0.08	0.09	0.10	11.06

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
25. ENGINEERING&SCIENCE TECH NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.03	0.04	0.04	0.04	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.74	2.02	2.24	2.45	2.61	2.69	9.06
57. ELECTRONIC COMPONENTS & ACCESS.	1.13	1.36	1.54	1.73	1.90	2.00	12.09
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.08	0.10	0.11	0.13	0.16	0.18	17.86
60. AIRCRAFT & PARTS	3.51	3.98	4.40	4.87	5.22	5.37	8.84
61. OTHER TRANSPORTATION EQ.	0.19	0.20	0.21	0.21	0.22	0.23	3.24
62. INSTRUMENTS & SUPPLIES	0.64	0.73	0.80	0.88	0.95	0.99	9.11
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.10	0.11	0.12	0.14	0.15	0.16	8.66
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.16
65. TRANSPORTATION & WAREHOUSING	0.06	0.06	0.06	0.07	0.07	0.07	3.06
66. COMMUNICATION EXC. RADIO & TV	0.13	0.14	0.15	0.16	0.17	0.17	5.94
67. RADIO & TV BROADCASTING	0.29	0.32	0.34	0.36	0.38	0.39	6.07
68. UTILITIES	0.24	0.26	0.28	0.30	0.32	0.33	6.57
69. WHOLESALE & RETAIL TRADE	0.03	0.03	0.03	0.04	0.04	0.04	8.62
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.02	0.02	11.22
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	8.98
72. PERSONAL SERVICES EXC. AUTO.	0.02	0.02	0.02	0.02	0.02	0.03	8.61
73. BUSINESS SERVICES	0.65	0.72	0.78	0.85	0.91	0.93	7.67
76. AMUSEMENTS	0.03	0.03	0.03	0.04	0.04	0.04	7.44
77. MISC. SERVICES	0.63	0.65	0.68	0.72	0.76	0.78	4.58
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.94	0.96	1.00	1.05	1.08	1.09	3.01
82. GOVERNMENT INDUSTRY	17.46	17.24	17.69	18.31	18.73	18.98	1.69
TOTAL, ALL INDUSTRIES	33.58	35.36	37.50	39.97	41.88	43.02	5.08
TOTAL EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	3.98	4.00	4.02	4.00	4.00	3.99	0.05
4. AGR., FORESTRY, & FISHERY SERV.	1.94	2.00	2.02	2.06	2.09	2.12	1.76
5. IRON ORE MINING	0.30	0.32	0.34	0.34	0.33	0.32	1.67
6. NONFERROUS METAL MINING	1.22	1.28	1.32	1.35	1.34	1.34	1.94
7. COAL MINING	1.47	1.55	1.62	1.67	1.73	1.78	3.94
8. CRUDE PETROLEUM & N. GAS	4.98	5.03	5.07	5.02	5.00	5.08	0.40
9. STONE&CLAY MINING & QUARRYING	0.53	0.55	0.57	0.59	0.61	0.61	2.75
10. CHEM&FERTILIZER MIN. MINING	0.39	0.40	0.41	0.42	0.43	0.43	1.99
11. NEW CONSTRUCTION	5.55	5.67	5.78	5.97	6.12	6.21	2.28
13. ORDNANCE & ACCESSORIES	3.81	3.92	4.01	4.13	4.21	4.27	2.30
14. FOOD & KINDRED PRODUCTS	9.19	9.41	9.56	9.63	9.63	9.66	1.00
16. FABRIC, YARN & THREAD MILLS	2.33	2.42	2.50	2.56	2.60	2.62	2.37

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
25. ENGINEERING & SCIENCE TECH NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
17. MISC. TEXTILE GOODS	1.13	1.17	1.22	1.26	1.28	1.29	2.73
20. LUMBER & WOOD PRODUCTS	2.59	2.77	2.85	2.92	2.91	2.85	1.92
24. PAPER & ALLIED PRODUCTS	2.45	2.52	2.54	2.54	2.54	2.53	0.67
27. CHEMICALS & PRODUCTS	14.73	15.11	15.44	15.69	15.88	16.06	1.75
28. PLASTICS & SYNTHETIC MATLS.	5.52	5.78	6.06	6.27	6.42	6.51	3.34
29. DRUGS, CLEANING & TOILET PREP.	13.34	13.58	13.94	14.25	14.40	14.58	1.79
30. PAINTS & ALLIED PRODUCTS	1.12	1.18	1.24	1.30	1.34	1.38	4.30
31. PET REFINING & REL. PROD.	3.83	3.86	3.92	3.99	4.03	4.06	1.17
32. RUBBER & MISC. PLASTICS PROD.	6.57	6.81	7.13	7.38	7.60	7.70	3.23
35. GLASS & GLASS PRODUCTS	0.61	0.62	0.62	0.63	0.62	0.61	0.08
36. STONE & CLAY PRODUCTS	2.36	2.39	2.42	2.46	2.46	2.41	0.46
37. PRIMARY FERROUS METALS	3.00	3.12	3.25	3.32	3.35	3.36	2.28
38. NONFERROUS METALS	2.71	2.85	3.00	3.14	3.23	3.32	4.15
40. FAB. STRUCTURAL METAL PRODUCTS	1.34	1.36	1.41	1.47	1.52	1.55	3.03
41. SCREW MACHINE PROD. & STAMPINGS	0.70	0.74	0.76	0.78	0.78	0.78	2.18
42. OTHER FAB. METAL PRODUCTS	1.04	1.09	1.16	1.22	1.26	1.31	4.78
43. ENGINES & TURBINES	1.03	1.08	1.13	1.16	1.18	1.20	3.03
45. CONSTR. & MINING MACHINERY	0.93	1.00	1.07	1.12	1.17	1.20	5.20
46. MATERIALS HANDLING MACH. & EQ.	0.33	0.35	0.38	0.40	0.41	0.43	5.17
47. METALWORKING MACH. & EQ.	0.71	0.74	0.78	0.81	0.84	0.85	3.76
48. SPECIAL INDUSTRY MACHINERY	0.83	0.87	0.93	1.00	1.04	1.09	5.68
49. GENERAL INDUSTRY MACHINERY	1.24	1.27	1.33	1.37	1.39	1.41	2.62
50. MISC. NONELECTRICAL MACH.	0.22	0.22	0.23	0.24	0.24	0.24	2.21
52. SERVICE INDUSTRY MACHINES	0.38	0.39	0.41	0.42	0.42	0.42	2.10
53. ELECTRICAL MACHINERY	1.13	1.18	1.25	1.31	1.34	1.37	3.88
55. ELECTRIC LIGHTING & WIRING EQ.	0.59	0.60	0.61	0.63	0.64	0.65	1.70
56. RADIO, TV, & COMMUNICATION EQ.	4.12	4.26	4.43	4.55	4.63	4.75	2.85
57. ELECTRONIC COMPONENTS & ACCESS.	5.16	5.42	5.73	6.00	6.21	6.38	4.32
58. MISC. ELECTRICAL MACH. & EQ.	0.97	1.00	1.04	1.05	1.06	1.07	2.13
59. MOTOR VEHICLES & EQUIPMENT	4.15	4.36	4.54	4.64	4.72	4.77	2.85
60. AIRCRAFT & PARTS	7.04	7.34	7.56	7.81	7.85	7.86	2.23
61. OTHER TRANSPORTATION EQ.	0.67	0.69	0.71	0.72	0.72	0.73	1.83
62. INSTRUMENTS & SUPPLIES	5.50	5.65	5.92	6.20	6.41	6.57	3.61
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.37	2.40	2.51	2.62	2.71	2.78	3.29
64. MISC. MANUFACTURING	0.87	0.89	0.92	0.94	0.96	0.97	2.12
65. TRANSPORTATION & WAREHOUSING	1.37	1.39	1.40	1.41	1.40	1.38	0.17
66. COMMUNICATION EXC. RADIO & TV	5.23	5.31	5.48	5.58	5.75	5.84	2.21
67. RADIO & TV BROADCASTING	14.47	14.60	14.70	14.61	14.45	14.30	-0.23
68. UTILITIES	11.05	11.13	11.20	11.26	11.33	11.38	0.59

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
25. ENGINEERING&SCIENCE TECH NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN
							% GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	4.50	4.60	4.69	4.77	4.82	4.88	1.64
70. FINANCE & INSURANCE	1.18	1.22	1.27	1.33	1.38	1.44	4.02
71. REAL ESTATE & RENTAL	0.23	0.24	0.24	0.25	0.26	0.26	2.56
72. PERSONAL SERVICES EXC. AUTO.	0.94	0.95	0.97	1.00	1.02	1.04	2.06
73. BUSINESS SERVICES	13.31	13.80	13.93	14.35	14.69	14.93	2.32
76. AMUSEMENTS	2.94	2.96	3.01	3.05	3.10	3.14	1.31
77. MISC. SERVICES	96.99	98.80	100.88	103.68	106.85	110.34	2.61
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	8.44	8.57	8.74	8.93	9.09	9.25	1.86
82. GOVERNMENT INDUSTRY	161.85	161.79	163.53	166.36	169.22	172.27	1.26
TOTAL, ALL INDUSTRIES	464.72	471.69	481.16	491.44	500.55	509.50	1.86

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
26. HEALTH WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.08	0.09	0.10	0.10	0.11	0.12	6.86
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	11.02
13. ORONANCE & ACCESSORIES	0.24	0.27	0.30	0.32	0.34	0.35	7.81
14. FOOD & KINDREO PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.68
24. PAPER & ALLIEO PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	6.40
27. CHEMICALS & PROOUCTS	0.06	0.07	0.07	0.08	0.09	0.09	7.73
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.02	0.02	0.02	8.70
29. ORUGS, CLEANING & TOILET PREP.	0.02	0.02	0.02	0.02	0.02	0.02	4.33
30. PAINTS & ALLIEO PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.25
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.02	5.24
32. RUBBER & MISC. PLASTICS PROD.	0.01	0.01	0.02	0.02	0.02	0.02	10.10
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.03
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.18
37. PRIMARY FERROUS METALS	0.07	0.08	0.08	0.09	0.09	0.10	7.59
38. NONFERROUS METALS	0.03	0.04	0.04	0.05	0.05	0.06	9.85
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	7.47
41. SCREW MACHINE PROO.&STAMPINGS	0.02	0.02	0.02	0.02	0.03	0.03	7.71
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.11
43. ENGINES & TURBINES	0.01	0.02	0.02	0.02	0.02	0.02	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.11
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.02	0.02	9.38
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.52
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.32
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.02	0.02	0.02	9.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.28
56. RADIO, TV, & COMMUNICATION EQ.	0.43	0.49	0.54	0.59	0.62	0.64	8.19
57. ELECTRONIC COMPONENTS & ACCESS.	0.06	0.08	0.09	0.10	0.10	0.11	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.02	0.02	0.02	0.03	0.03	17.15
60. AIRCRAFT & PARTS	0.42	0.48	0.53	0.58	0.62	0.64	8.57
61. OTHER TRANSPORTATION EQ.	0.20	0.22	0.22	0.23	0.23	0.24	3.43
62. INSTRUMENTS & SUPPLIES	0.32	0.36	0.40	0.44	0.47	0.49	8.84
63. OPTICAL, OPTHALMIC & PHOTO EQ.	0.02	0.02	0.02	0.02	0.02	0.02	8.67
65. TRANSPORTATION & WAREHOUSING	0.14	0.15	0.16	0.17	0.18	0.19	6.21
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.01	0.01	0.01	5.46
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.02	6.44



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
26. HEALTH WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	0.62	0.69	0.76	0.83	0.88	0.92	8.01
70. FINANCE & INSURANCE	0.06	0.07	0.08	0.09	0.10	0.10	9.67
71. REAL ESTATE & RENTAL	0.01	0.01	0.02	0.02	0.02	0.02	5.46
72. PERSONAL SERVICES EXC. AUTO.	0.09	0.09	0.10	0.11	0.12	0.12	7.23
73. BUSINESS SERVICES	1.29	1.50	1.69	1.91	2.10	2.24	11.58
74. EATING & DRINKING PLACES	0.01	0.01	0.01	0.01	0.02	0.02	9.75
77. MISC. SERVICES	18.52	19.21	20.18	21.59	22.81	23.56	4.93
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	9.44	9.78	10.22	10.79	11.17	11.42	2.89
82. GOVERNMENT INDUSTRY	11.93	11.76	12.05	12.44	12.71	12.86	1.50
TOTAL, ALL INDUSTRIES	44.37	45.81	48.04	50.98	53.30	54.74	4.29
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	4.55	4.67	4.72	4.83	4.88	4.96	1.76
6. NONFERROUS METAL MINING	0.11	0.12	0.13	0.13	0.13	0.13	2.44
13. ORNANCE & ACCESSORIES	0.40	0.41	0.41	0.42	0.43	0.43	1.71
14. FOOD & KINDRED PRODUCTS	1.16	1.18	1.19	1.19	1.19	1.19	0.54
24. PAPER & ALLIED PRODUCTS	0.68	0.70	0.71	0.71	0.71	0.70	0.58
27. CHEMICALS & PRODUCTS	1.31	1.34	1.36	1.38	1.39	1.39	1.21
28. PLASTICS & SYNTHETIC MATLS.	0.50	0.52	0.53	0.55	0.55	0.56	2.31
29. DRUGS, CLEANING & TOILET PREP.	5.13	5.17	5.26	5.33	5.34	5.37	0.92
30. PAINTS & ALLIED PRODUCTS	0.13	0.13	0.14	0.14	0.14	0.15	3.02
31. PET REFINING & REL. PROD.	0.22	0.22	0.22	0.22	0.22	0.22	0.30
32. RUBBER & MISC. PLASTICS PROD.	0.44	0.46	0.48	0.49	0.50	0.51	2.69
35. GLASS & GLASS PRODUCTS	0.26	0.26	0.26	0.26	0.25	0.25	0.57
36. STONE & CLAY PRODUCTS	0.20	0.20	0.20	0.21	0.21	0.21	0.96
37. PRIMARY FERROUS METALS	0.96	0.99	1.02	1.03	1.03	1.02	1.24
38. NONFERROUS METALS	0.41	0.43	0.44	0.46	0.47	0.46	3.23
40. FAB. STRUCTURAL METAL PRODUCTS	0.63	0.63	0.64	0.66	0.68	0.69	1.74
41. SCREW MACHINE PROD. & STAMPINGS	0.31	0.32	0.33	0.34	0.34	0.34	2.18
42. OTHER FAB. METAL PRODUCTS	0.18	0.19	0.20	0.20	0.21	0.22	3.39
43. ENGINES & TURBINES	0.16	0.17	0.17	0.18	0.16	0.16	1.77
45. CONSTR. & MINING MACHINERY	0.55	0.58	0.61	0.63	0.65	0.65	3.63
46. MATERIALS HANDLING MACH. & EQ.	0.20	0.20	0.21	0.22	0.23	0.23	3.31
47. METALWORKING MACH. & EQ.	0.20	0.21	0.22	0.23	0.24	0.24	3.79
49. GENERAL INDUSTRY MACHINERY	0.22	0.23	0.24	0.25	0.25	0.26	2.62
51. OFFICE, COMPUTING & ACCT. MACH.	0.26	0.27	0.28	0.28	0.29	0.29	2.72
53. ELECTRICAL MACHINERY	0.22	0.23	0.24	0.24	0.24	0.25	2.00
55. ELECTRIC LIGHTING & WIRING EQ.	0.17	0.18	0.18	0.19	0.19	0.19	1.73

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
26. HEALTH WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
56. RADIO, TV, & COMMUNICATION EQ.	1.01	1.04	1.07	1.09	1.10	1.12	2.03
57. ELECTRONIC COMPONENTS & ACCESS.	0.29	0.30	0.32	0.33	0.34	0.35	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.24	0.25	0.26	0.26	0.27	0.27	2.12
59. MOTOR VEHICLES & EQUIPMENT	0.77	0.81	0.83	0.85	0.86	0.86	2.24
60. AIRCRAFT & PARTS	0.84	0.88	0.90	0.93	0.93	0.93	1.98
61. OTHER TRANSPORTATION EQ.	0.70	0.72	0.75	0.77	0.77	0.78	2.02
62. INSTRUMENTS & SUPPLIES	2.74	2.80	2.93	3.06	3.16	3.22	3.35
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.36	0.37	0.38	0.40	0.42	0.43	3.30
65. TRANSPORTATION & WAREHOUSING	3.23	3.37	3.50	3.64	3.73	3.79	3.24
66. COMMUNICATION EXC. RADIO & TV	0.35	0.35	0.36	0.37	0.38	0.38	1.75
68. UTILITIES	0.52	0.52	0.52	0.53	0.53	0.53	0.47
69. WHOLESALE & RETAIL TRADE	101.89	103.55	105.18	106.31	106.85	107.48	1.07
70. FINANCE & INSURANCE	7.39	7.54	7.71	7.93	8.17	8.39	2.57
71. REAL ESTATE & RENTAL	0.49	0.49	0.49	0.49	0.48	0.48	-0.74
72. PERSONAL SERVICES EXC. AUTO.	4.64	4.66	4.71	4.75	4.79	4.82	0.76
73. BUSINESS SERVICES	26.64	28.36	30.20	32.22	34.08	35.73	6.04
74. EATING & DRINKING PLACES	0.65	0.67	0.68	0.68	0.69	0.69	1.05
77. MISC. SERVICES	2,868.52	2,933.61	3,006.11	3,099.89	3,204.66	3,319.22	2.96
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	446.84	456.03	466.63	480.28	495.26	511.52	2.74
82. GOVERNMENT INDUSTRY	253.83	252.86	254.76	258.47	262.20	265.96	0.94
TOTAL, ALL INDUSTRIES	3,776.29	3,853.99	3,943.58	4,058.93	4,185.51	4,322.96	2.74

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
27. DENTISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
77. MISC. SERVICES	0.44	0.46	0.49	0.52	0.56	0.58	5.55
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.55	1.65	1.76	1.88	1.97	2.03	5.60
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	0.85
TOTAL, ALL INDUSTRIES	2.01	2.13	2.26	2.43	2.54	2.63	5.57
TOTAL EMPLOYMENT							
77. MISC. SERVICES	68.17	70.16	72.34	75.04	78.01	81.23	3.57
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	124.23	127.72	131.58	136.38	141.66	147.37	3.47
82. GOVERNMENT INDUSTRY	2.33	2.32	2.33	2.36	2.39	2.41	0.67
TOTAL, ALL INDUSTRIES	194.81	200.28	206.34	213.86	222.13	231.09	3.47

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
28. PROFESSIONAL NURSES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TD 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.13	0.14	0.15	0.16	0.17	0.18	7.31
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.36
27. CHEMICALS & PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.04	7.84
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.71
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	8.27
32. RUBBER & MISC. PLASTICS PROD.	0.01	0.01	0.01	0.01	0.01	0.01	9.88
37. PRIMARY FERROUS METALS	0.05	0.05	0.06	0.06	0.07	0.07	7.67
38. NONFERROUS METALS	0.03	0.04	0.04	0.04	0.05	0.05	9.90
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	7.86
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.02	0.02	0.02	0.02	0.02	7.72
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.14
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.73
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.11
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.02	0.02	9.39
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.52
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.28
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.28
56. RADIO, TV, & COMMUNICATION EQ.	0.19	0.22	0.24	0.26	0.28	0.28	8.12
57. ELECTRONIC COMPONENTS & ACCESS.	0.05	0.07	0.07	0.08	0.09	0.09	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.02	0.02	0.02	0.03	0.03	17.14
60. AIRCRAFT & PARTS	0.25	0.28	0.31	0.34	0.36	0.37	8.58
61. OTHER TRANSPORTATION EQ.	0.07	0.07	0.07	0.08	0.08	0.08	3.28
62. INSTRUMENTS & SUPPLIES	0.03	0.03	0.03	0.04	0.04	0.04	8.35
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.03	0.03	0.03	4.25
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.01	0.01	0.01	5.48
70. FINANCE & INSURANCE	0.03	0.04	0.04	0.05	0.05	0.05	9.43
71. REAL ESTATE & RENTAL	0.01	0.01	0.02	0.02	0.02	0.02	5.31
72. PERSONAL SERVICES EXC. AUTO.	0.03	0.03	0.04	0.04	0.04	0.04	5.77
77. MISC. SERVICES	7.00	7.35	7.81	8.44	9.01	9.39	6.06
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.86	0.90	0.94	1.00	1.03	1.06	4.20
82. GOVERNMENT INDUSTRY	3.65	3.59	3.67	3.78	3.85	3.89	1.30
TOTAL, ALL INDUSTRIES	12.65	13.11	13.81	14.73	15.51	16.01	4.83

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
28. PROFESSIONAL NURSES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
13. ORDNANCE & ACCESSORIES	0.21	0.21	0.21	0.22	0.22	0.22	1.24
24. PAPER & ALLIED PRODUCTS	0.57	0.59	0.59	0.59	0.59	0.59	0.55
27. CHEMICALS & PRODUCTS	0.52	0.53	0.54	0.54	0.55	0.55	1.31
28. PLASTICS & SYNTHETIC MATLS.	0.27	0.28	0.29	0.30	0.31	0.31	2.32
31. PET REFINING & REL. PROD.	0.14	0.14	0.14	0.15	0.15	0.15	0.33
32. RUBBER & MISC. PLASTICS PROD.	0.34	0.35	0.36	0.37	0.38	0.38	2.49
37. PRIMARY FERROUS METALS	0.69	0.71	0.73	0.74	0.74	0.74	1.31
38. NONFERROUS METALS	0.36	0.38	0.39	0.41	0.42	0.42	3.27
40. FAB. STRUCTURAL METAL PRODUCTS	0.29	0.30	0.30	0.31	0.32	0.33	2.11
41. SCREW MACHINE PROD. & STAMPINGS	0.22	0.23	0.24	0.25	0.25	0.25	2.19
42. OTHER FAB. METAL PRODUCTS	0.15	0.16	0.17	0.17	0.18	0.18	3.41
43. ENGINES & TURBINES	0.11	0.11	0.11	0.11	0.12	0.12	1.79
46. MATERIALS HANDLING MACH. & EQ.	0.13	0.13	0.14	0.14	0.15	0.15	3.61
47. METALWORKING MACH. & EQ.	0.20	0.21	0.22	0.23	0.24	0.24	3.79
49. GENERAL INDUSTRY MACHINERY	0.20	0.21	0.22	0.22	0.23	0.23	2.63
51. OFFICE, COMPUTING & ACCT. MACH.	0.19	0.20	0.21	0.21	0.21	0.22	2.69
53. ELECTRICAL MACHINERY	0.19	0.20	0.20	0.21	0.21	0.21	2.00
55. ELECTRIC LIGHTING & WIRING EQ.	0.17	0.17	0.17	0.17	0.18	0.18	1.73
56. RADIO, TV, & COMMUNICATION EQ.	0.45	0.46	0.48	0.48	0.49	0.50	1.97
57. ELECTRONIC COMPONENTS & ACCESS.	0.25	0.26	0.27	0.28	0.29	0.30	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.21	0.22	0.23	0.23	0.24	0.24	2.13
59. MOTOR VEHICLES & EQUIPMENT	0.74	0.77	0.80	0.81	0.82	0.83	2.22
60. AIRCRAFT & PARTS	0.49	0.51	0.53	0.54	0.54	0.54	1.98
61. OTHER TRANSPORTATION EQ.	0.24	0.24	0.25	0.26	0.26	0.26	1.87
62. INSTRUMENTS & SUPPLIES	0.24	0.25	0.26	0.27	0.27	0.28	2.88
65. TRANSPORTATION & WAREHOUSING	0.61	0.62	0.63	0.65	0.65	0.65	1.33
66. COMMUNICATION EXC. RADIO & TV	0.26	0.27	0.27	0.28	0.28	0.29	1.76
70. FINANCE & INSURANCE	3.91	3.97	4.06	4.16	4.28	4.39	2.34
71. REAL ESTATE & RENTAL	0.47	0.47	0.47	0.46	0.46	0.45	-0.89
72. PERSONAL SERVICES EXC. AUTO.	1.69	1.67	1.66	1.65	1.65	1.64	-0.60
77. MISC. SERVICES	1.083.95	1,121.85	1,162.63	1,211.67	1,265.21	1,322.84	4.06
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	41.52	42.82	44.25	45.99	47.88	49.90	3.74
82. GOVERNMENT INDUSTRY	98.55	98.24	99.05	100.56	102.07	103.60	1.00
TOTAL, ALL INDUSTRIES	1,257.85	1,297.08	1,340.51	1,393.13	1,450.28	1,511.60	3.74

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
29. PHYSICIANS, MEDICAL&OSTEOPATHIC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INOUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.04	0.05	0.05	0.05	0.06	0.06	8.09
56. RADIO, TV, & COMMUNICATION EQ.	0.04	0.05	0.05	0.05	0.06	0.06	8.16
60. AIRCRAFT & PARTS	0.04	0.04	0.05	0.05	0.06	0.06	8.53
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	3.48
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.01	0.01	10.24
73. BUSINESS SERVICES	0.02	0.02	0.02	0.03	0.03	0.03	11.93
77. MISC. SERVICES	2.22	2.31	2.44	2.61	2.77	2.87	5.27
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.40	3.49	3.64	3.83	3.95	4.03	3.44
82. GOVERNMENT INDUSTRY	0.85	0.83	0.85	0.87	0.89	0.89	1.02
TOTAL, ALL INDUSTRIES	6.66	6.85	7.16	7.57	7.88	8.07	3.93
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.07	0.07	0.07	0.07	0.07	0.07	1.98
56. RADIO, TV, & COMMUNICATION EQ.	0.09	0.10	0.10	0.10	0.10	0.10	2.01
60. AIRCRAFT & PARTS	0.08	0.08	0.08	0.09	0.09	0.09	1.94
61. OTHER TRANSPORTATION EQ.	0.03	0.04	0.04	0.04	0.04	0.04	2.06
70. FINANCE & INSURANCE	1.01	1.04	1.07	1.11	1.14	1.18	3.10
73. BUSINESS SERVICES	0.38	0.40	0.43	0.46	0.49	0.51	6.38
77. MISC. SERVICES	343.91	352.91	362.85	375.36	389.25	404.34	3.29
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	157.88	161.48	165.64	170.96	176.84	183.24	3.02
82. GOVERNMENT INDUSTRY	38.13	37.83	37.94	38.31	38.68	39.11	0.51
TOTAL, ALL INDUSTRIES	542.82	555.19	569.50	587.79	608.00	630.01	3.02

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
30. ALL OTHER HEALTH PROFESSIONALS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDOUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.08	0.09	0.09	0.10	0.11	0.11	6.90
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.01	4.34
69. WHOLESALE & RETAIL TRADE	0.58	0.65	0.71	0.77	0.83	0.86	8.08
77. MISC. SERVICES	0.34	0.36	0.38	0.40	0.43	0.44	5.41
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.78	3.25	3.79	4.39	4.94	5.42	14.29
82. GOVERNMENT INDUSTRY	0.87	1.03	1.23	1.44	1.65	1.83	16.02
TOTAL, ALL INDUSTRIES	4.69	5.42	6.25	7.17	8.02	8.75	13.30
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	4.45	4.58	4.63	4.73	4.79	4.87	1.80
29. DRUGS, CLEANING & TOILET PREP.	3.42	3.45	3.51	3.56	3.57	3.58	0.93
69. WHOLESALE & RETAIL TRADE	95.24	96.86	98.44	99.55	100.12	100.77	1.13
77. MISC. SERVICES	52.35	54.34	56.00	57.93	59.88	61.96	3.43
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	106.33	111.47	116.54	121.71	126.58	131.50	4.34
82. GOVERNMENT INDUSTRY	21.38	25.85	30.61	35.73	40.95	46.02	16.58
TOTAL, ALL INDUSTRIES	285.38	299.17	312.76	326.66	339.73	352.91	4.34

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
31. OTHER HEALTH WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INOUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.07	0.08	0.09	0.10	0.11	0.11	8.46
27. CHEMICALS & PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05	7.70
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.24
37. PRIMARY FERROUS METALS	0.02	0.02	0.02	0.02	0.02	0.02	7.38
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	7.11
56. RADIO, TV, & COMMUNICATION EQ.	0.20	0.23	0.25	0.27	0.29	0.29	8.19
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.01	0.01	0.01	11.43
60. AIRCRAFT & PARTS	0.14	0.15	0.17	0.19	0.20	0.21	8.58
61. OTHER TRANSPORTATION EQ.	0.13	0.13	0.14	0.14	0.14	0.15	3.51
62. INSTRUMENTS & SUPPLIES	0.28	0.32	0.35	0.39	0.42	0.43	8.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.68
65. TRANSPORTATION & WAREHOUSING	0.11	0.12	0.12	0.13	0.14	0.15	6.74
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	6.91
69. WHOLESALE & RETAIL TRADE	0.04	0.04	0.04	0.05	0.05	0.05	6.86
70. FINANCE & INSURANCE	0.02	0.02	0.03	0.03	0.03	0.03	9.21
72. PERSONAL SERVICES EXC. AUTO.	0.05	0.05	0.05	0.05	0.04	0.04	-2.49
73. BUSINESS SERVICES	1.27	1.47	1.66	1.88	2.07	2.20	11.56
74. EATING & DRINKING PLACES	0.01	0.01	0.01	0.01	0.01	0.01	-3.25
77. MISC. SERVICES	8.52	8.74	9.08	9.61	10.05	10.28	3.83
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.58	0.59	0.61	0.64	0.65	0.66	2.49
82. GOVERNMENT INDUSTRY	6.55	6.29	6.29	6.33	6.31	6.23	-1.01
TOTAL, ALL INDUSTRIES	18.12	18.42	19.08	20.02	20.73	21.06	3.06
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.12	0.13	0.13	0.13	0.14	0.14	2.33
27. CHEMICALS & PRODUCTS	0.73	0.75	0.76	0.77	0.77	0.78	1.18
30. PAINTS & ALLIED PRODUCTS	0.11	0.11	0.12	0.12	0.13	0.13	3.02
37. PRIMARY FERROUS METALS	0.24	0.24	0.25	0.25	0.25	0.25	1.03
40. FAB. STRUCTURAL METAL PRODUCTS	0.33	0.33	0.33	0.34	0.35	0.35	1.40
56. RADIO, TV, & COMMUNICATION EQ.	0.47	0.48	0.50	0.51	0.51	0.52	2.03
57. ELECTRONIC COMPONENTS & ACCESS.	0.03	0.03	0.03	0.04	0.04	0.04	3.71
60. AIRCRAFT & PARTS	0.27	0.28	0.29	0.30	0.30	0.30	1.98
61. OTHER TRANSPORTATION EQ.	0.43	0.45	0.46	0.47	0.48	0.48	2.10
62. INSTRUMENTS & SUPPLIES	2.43	2.49	2.60	2.72	2.80	2.87	3.38
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.20	0.21	0.21	0.22	0.23	0.24	3.31
65. TRANSPORTATION & WAREHOUSING	2.52	2.63	2.75	2.88	2.96	3.03	3.75



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
31. OTHER HEALTH WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	0.26	0.26	0.27	0.27	0.27	0.27	0.91
69. WHOLESALE & RETAIL TRADE	5.96	5.99	6.02	6.02	5.99	5.96	-0.01
70. FINANCE & INSURANCE	2.44	2.47	2.52	2.58	2.65	2.71	2.13
72. PERSONAL SERVICES EXC. AUTO.	2.47	2.29	2.12	1.94	1.77	1.60	-8.37
73. BUSINESS SERVICES	26.19	27.87	29.67	31.65	33.47	35.08	6.02
74. EATING & DRINKING PLACES	0.53	0.49	0.44	0.39	0.34	0.30	-10.91
77. MISC. SERVICES	1,320.14	1,334.34	1,352.29	1,379.88	1,412.31	1,448.86	1.88
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	27.31	27.56	27.90	28.43	29.05	29.73	1.72
82. GOVERNMENT INDUSTRY	97.95	95.39	93.96	93.19	92.43	91.67	-1.32
TOTAL, ALL INDUSTRIES	1,510.38	1,524.04	1,542.88	1,572.36	1,606.42	1,644.42	1.72

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
32. TECHNICIANS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDOUCEO EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.02	0.02	0.02	0.03	0.03	0.03	6.86
6. NONFERROUS METAL MINING	0.01	0.02	0.02	0.02	0.02	0.02	11.49
7. COAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	9.30
8. CRUDE PETROLEUM & N. GAS	0.10	0.10	0.11	0.11	0.12	0.12	4.02
11. NEW CONSTRUCTION	0.06	0.07	0.08	0.08	0.09	0.09	8.52
13. ORNANCE & ACCESSORIES	1.06	1.19	1.30	1.40	1.47	1.52	7.64
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.02	0.02	0.02	5.97
24. PAPER & ALLIED PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	6.87
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.01	0.01	0.01	4.97
27. CHEMICALS & PRODUCTS	0.07	0.07	0.08	0.09	0.09	0.10	7.78
28. PLASTICS & SYNTHETIC MATLS.	0.03	0.04	0.04	0.05	0.05	0.05	8.71
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.24
31. PET REFINING & REL. PROD.	0.02	0.02	0.02	0.02	0.02	0.02	5.27
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.03	0.03	0.04	0.04	0.04	10.30
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.39
36. STONE & CLAY PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	8.12
37. PRIMARY FERROUS METALS	0.09	0.10	0.11	0.12	0.13	0.13	7.45
38. NONFERROUS METALS	0.11	0.13	0.14	0.15	0.16	0.17	9.55
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.05	0.05	0.06	0.06	0.07	7.68
41. SCREW MACHINE PROD. & STAMPINGS	0.02	0.03	0.03	0.03	0.03	0.04	7.70
42. OTHER FAB. METAL PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.05	9.86
43. ENGINES & TURBINES	0.03	0.04	0.04	0.04	0.05	0.05	7.69
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.02	0.02	0.02	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.03	0.03	0.03	0.03	9.12
47. METALWORKING MACH. & EQ.	0.07	0.08	0.09	0.10	0.10	0.11	9.37
49. GENERAL INDUSTRY MACHINERY	0.04	0.05	0.05	0.06	0.06	0.06	7.52
50. MISC. NONELECTRICAL MACH.	0.05	0.05	0.06	0.06	0.07	0.07	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.33
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.01	13.38
53. ELECTRICAL MACHINERY	0.04	0.04	0.05	0.05	0.06	0.06	9.21
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.27
56. RADIO, TV, & COMMUNICATION EQ.	1.59	1.84	2.02	2.20	2.32	2.37	8.27
57. ELECTRONIC COMPONENTS & ACCESS.	0.20	0.24	0.27	0.30	0.33	0.34	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.02	0.02	0.02	0.03	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.02	0.02	0.03	0.03	0.04	0.05	17.14
60. AIRCRAFT & PARTS	2.17	2.46	2.71	2.99	3.19	3.28	8.59
61. OTHER TRANSPORTATION EQ.	0.23	0.25	0.25	0.26	0.27	0.28	3.40

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
32. TECHNICIANS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
62. INSTRUMENTS & SUPPLIES	0.17	0.19	0.21	0.22	0.24	0.25	7.78
63. OPTICAL, OPTHALMIC & PHOTO EQ.	0.05	0.05	0.05	0.06	0.07	0.07	8.48
65. TRANSPORTATION & WAREHOUSING	2.67	2.85	3.02	3.24	3.41	3.52	5.71
66. COMMUNICATION EXC. RADIO & TV	0.04	0.04	0.05	0.05	0.05	0.06	6.63
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.22
68. UTILITIES	0.09	0.10	0.10	0.11	0.12	0.12	5.99
69. WHOLESALE & RETAIL TRADE	0.07	0.08	0.09	0.10	0.11	0.12	9.69
70. FINANCE & INSURANCE	0.08	0.09	0.10	0.11	0.12	0.13	9.78
71. REAL ESTATE & RENTAL	0.01	0.01	0.02	0.02	0.02	0.02	6.08
72. PERSONAL SERVICES EXC. AUTO.	0.33	0.37	0.40	0.44	0.47	0.49	8.20
73. BUSINESS SERVICES	0.02	0.03	0.03	0.03	0.04	0.04	8.69
76. AMUSEMENTS	0.02	0.02	0.02	0.02	0.02	0.02	7.57
77. MISC. SERVICES	0.30	0.30	0.31	0.32	0.34	0.34	2.88
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.51	0.52	0.54	0.56	0.57	0.58	2.46
82. GOVERNMENT INDUSTRY	12.36	12.09	12.29	12.61	12.79	12.85	0.79
TOTAL, ALL INDUSTRIES	23.08	23.96	25.12	26.52	27.51	28.03	3.97
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	1.11	1.14	1.15	1.18	1.19	1.21	1.76
6. NONFERROUS METAL MINING	0.24	0.26	0.27	0.27	0.27	0.28	2.88
7. COAL MINING	0.22	0.24	0.25	0.25	0.26	0.27	3.59
8. CRUDE PETROLEUM & N. GAS	1.33	1.33	1.32	1.30	1.28	1.28	-0.75
11. NEW CONSTRUCTION	1.68	1.71	1.74	1.80	1.84	1.86	2.10
13. ORDNANCE & ACCESSORIES	1.75	1.78	1.81	1.85	1.87	1.89	1.55
16. FABRIC, YARN & THREAD MILLS	1.00	1.03	1.07	1.10	1.12	1.13	2.55
24. PAPER & ALLIED PRODUCTS	0.95	0.98	1.00	1.00	1.00	1.00	1.02
26. PRINTING & PUBLISHING	0.73	0.73	0.73	0.72	0.72	0.71	-0.59
27. CHEMICALS & PRODUCTS	1.41	1.44	1.46	1.48	1.49	1.50	1.26
28. PLASTICS & SYNTHETIC MATLS.	1.45	1.50	1.56	1.59	1.62	1.62	2.31
30. PAINTS & ALLIED PRODUCTS	0.11	0.11	0.12	0.12	0.13	0.13	3.02
31. PET REFINING & REL. PROD.	0.33	0.33	0.33	0.33	0.34	0.34	0.33
32. RUBBER & MISC. PLASTICS PROD.	0.99	1.02	1.07	1.10	1.13	1.14	2.87
35. GLASS & GLASS PRODUCTS	0.41	0.41	0.41	0.41	0.41	0.40	-0.24
36. STONE & CLAY PRODUCTS	0.44	0.45	0.46	0.47	0.47	0.47	0.90
37. PRIMARY FERROUS METALS	1.30	1.33	1.37	1.38	1.38	1.37	1.10
38. NONFERROUS METALS	1.29	1.34	1.40	1.44	1.47	1.49	2.94
40. FAB. STRUCTURAL METAL PRODUCTS	1.02	1.03	1.05	1.09	1.11	1.12	1.92
41. SCREW MACHINE PROD. & STAMPINGS	0.40	0.42	0.43	0.44	0.44	0.44	2.17

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
32. TECHNICIANS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
42. OTHER FAB. METAL PRODUCTS	0.71	0.73	0.77	0.79	0.81	0.83	3.15
43. ENGINES & TURBINES	0.40	0.41	0.43	0.43	0.43	0.43	1.75
45. CONSTR. & MINING MACHINERY	1.05	1.11	1.16	1.20	1.24	1.25	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.37	0.39	0.41	0.43	0.44	0.45	3.62
47. METALWORKING MACH. & EQ.	1.34	1.40	1.48	1.54	1.58	1.61	3.77
49. GENERAL INDUSTRY MACHINERY	0.99	1.01	1.06	1.09	1.10	1.12	2.63
50. MISC. NONELECTRICAL MACH.	0.41	0.42	0.44	0.45	0.45	0.46	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	0.55	0.57	0.60	0.61	0.62	0.63	2.73
52. SERVICE INDUSTRY MACHINES	0.39	0.40	0.42	0.43	0.43	0.43	2.11
53. ELECTRICAL MACHINERY	0.76	0.78	0.81	0.83	0.84	0.85	2.15
55. ELECTRIC LIGHTING & WIRING EQ.	0.17	0.17	0.17	0.18	0.18	0.18	1.72
56. RADIO, TV, & COMMUNICATION EQ.	3.77	3.87	4.00	4.07	4.11	4.19	2.11
57. ELECTRONIC COMPONENTS & ACCESS.	0.91	0.95	1.00	1.04	1.07	1.09	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.60	0.62	0.65	0.65	0.66	0.67	2.12
59. MOTOR VEHICLES & EQUIPMENT	1.07	1.11	1.15	1.17	1.18	1.19	2.23
60. AIRCRAFT & PARTS	4.35	4.52	4.65	4.79	4.80	4.80	2.00
61. OTHER TRANSPORTATION EQ.	0.81	0.83	0.86	0.88	0.88	0.89	1.98
62. INSTRUMENTS & SUPPLIES	1.45	1.47	1.52	1.57	1.61	1.63	2.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.06	1.07	1.12	1.17	1.21	1.24	3.12
65. TRANSPORTATION & WAREHOUSING	62.70	64.96	67.14	69.65	70.95	71.81	2.75
66. COMMUNICATION EXC. RADIO & TV	1.63	1.67	1.73	1.78	1.84	1.88	2.88
67. RADIO & TV BROADCASTING	0.31	0.32	0.33	0.34	0.34	0.34	1.78
68. UTILITIES	4.13	4.14	4.14	4.14	4.14	4.14	0.05
69. WHOLESALE & RETAIL TRADE	12.16	12.56	12.97	13.31	13.58	13.86	2.64
70. FINANCE & INSURANCE	9.36	9.56	9.79	10.08	10.39	10.68	2.67
71. REAL ESTATE & RENTAL	0.47	0.47	0.47	0.48	0.47	0.47	-0.16
72. PERSONAL SERVICES EXC. AUTO.	18.04	18.30	18.63	18.97	19.31	19.61	1.68
73. BUSINESS SERVICES	0.51	0.53	0.55	0.57	0.59	0.60	3.30
76. AMUSEMENTS	1.64	1.65	1.68	1.71	1.73	1.76	1.43
77. MISC. SERVICES	45.91	45.96	46.14	46.65	47.32	48.13	0.95
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.54	4.61	4.70	4.80	4.88	4.95	1.74
82. GOVERNMENT INDUSTRY	101.51	101.35	102.37	104.18	105.98	107.64	1.18
TOTAL, ALL INDUSTRIES	308.81	310.96	316.91	323.98	329.44	334.22	1.74

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
33. AIRPLANE PILOTS&FLIGHT ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.02	0.02	0.02	0.03	0.03	0.03	6.86
8. CRUDE PETROLEUM & N. GAS	0.04	0.04	0.05	0.05	0.05	0.05	4.55
11. NEW CONSTRUCTION	0.02	0.03	0.03	0.03	0.03	0.04	8.38
13. ORDNANCE & ACCESSORIES	0.33	0.37	0.41	0.44	0.46	0.48	7.74
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.87
27. CHEMICALS & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.03	7.70
37. PRIMARY FERROUS METALS	0.06	0.07	0.08	0.08	0.09	0.09	7.43
38. NONFERROUS METALS	0.02	0.03	0.03	0.03	0.03	0.04	9.41
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.01	0.01	0.02	0.02	0.02	7.68
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.73
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.66
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.33
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.54
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.02	9.23
56. RADIO, TV, & COMMUNICATION EQ.	0.34	0.40	0.44	0.47	0.50	0.51	8.29
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.05	0.06	0.06	0.07	0.07	11.35
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.02	0.02	0.02	17.14
60. AIRCRAFT & PARTS	0.92	1.04	1.14	1.26	1.35	1.39	8.59
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.06	3.43
62. INSTRUMENTS & SUPPLIES	0.02	0.03	0.03	0.03	0.03	0.03	7.78
65. TRANSPORTATION & WAREHOUSING	2.31	2.47	2.61	2.81	2.95	3.04	5.66
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	5.84
69. WHOLESALE & RETAIL TRADE	0.02	0.02	0.02	0.02	0.02	0.03	8.65
70. FINANCE & INSURANCE	0.02	0.02	0.02	0.02	0.03	0.03	10.21
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	6.11
73. BUSINESS SERVICES	0.02	0.02	0.02	0.02	0.03	0.03	8.98
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	2.38
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.30	0.31	0.33	0.34	0.35	0.36	3.79
82. GOVERNMENT INDUSTRY	2.08	2.04	2.08	2.14	2.18	2.19	1.10
TOTAL, ALL INDUSTRIES	6.81	7.22	7.65	8.16	8.54	8.75	5.14
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	1.10	1.13	1.14	1.17	1.18	1.20	1.76
8. CRUDE PETROLEUM & N. GAS	0.56	0.56	0.56	0.55	0.54	0.55	-0.25
11. NEW CONSTRUCTION	0.64	0.65	0.66	0.68	0.70	0.71	1.97
13. ORDNANCE & ACCESSORIES	0.55	0.56	0.57	0.58	0.59	0.60	1.65

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
33. AIRPLANE PILOTS&FLIGHT ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
24. PAPER & ALLIED PRODUCTS	0.43	0.44	0.45	0.45	0.45	0.45	1.03
27. CHEMICALS & PRODUCTS	0.37	0.38	0.38	0.39	0.39	0.39	1.18
37. PRIMARY FERROUS METALS	0.88	0.91	0.93	0.94	0.94	0.93	1.08
38. NONFERROUS METALS	0.26	0.27	0.29	0.29	0.30	0.30	2.81
41. SCREW MACHINE PROD.&STAMPINGS	0.19	0.20	0.20	0.21	0.21	0.21	2.15
42. OTHER FAB. METAL PRODUCTS	0.14	0.15	0.15	0.16	0.16	0.16	3.03
43. ENGINES & TURBINES	0.12	0.13	0.13	0.13	0.13	0.13	1.72
47. METALWORKING MACH. & EQ.	0.13	0.13	0.14	0.15	0.15	0.15	3.73
49. GENERAL INDUSTRY MACHINERY	0.19	0.19	0.20	0.20	0.21	0.21	2.64
53. ELECTRICAL MACHINERY	0.19	0.20	0.21	0.21	0.21	0.22	2.17
56. RADIO, TV, & COMMUNICATION EQ.	0.81	0.83	0.86	0.88	0.89	0.90	2.13
57. ELECTRONIC COMPONENTS & ACCESS.	0.20	0.20	0.21	0.22	0.23	0.23	3.63
59. MOTOR VEHICLES & EQUIPMENT	0.53	0.55	0.57	0.58	0.59	0.59	2.23
60. AIRCRAFT & PARTS	1.84	1.91	1.97	2.03	2.03	2.03	1.99
61. OTHER TRANSPORTATION EQ.	0.16	0.17	0.18	0.18	0.18	0.18	2.02
62. INSTRUMENTS & SUPPLIES	0.19	0.19	0.20	0.21	0.21	0.22	2.34
65. TRANSPORTATION & WAREHOUSING	54.33	56.26	58.13	60.27	61.37	62.09	2.70
68. UTILITIES	0.36	0.36	0.36	0.36	0.36	0.36	-0.10
69. WHOLESALE & RETAIL TRADE	2.73	2.79	2.85	2.90	2.93	2.96	1.67
70. FINANCE & INSURANCE	1.97	2.02	2.07	2.14	2.22	2.29	3.07
71. REAL ESTATE & RENTAL	0.33	0.33	0.33	0.33	0.33	0.33	-0.13
73. BUSINESS SERVICES	0.37	0.38	0.40	0.41	0.43	0.44	3.57
77. MISC. SERVICES	1.97	1.96	1.96	1.97	1.99	2.02	0.46
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.35	3.45	3.55	3.66	3.72	3.77	2.34
82. GOVERNMENT INDUSTRY	6.57	6.55	6.61	6.72	6.83	6.92	1.05
TOTAL, ALL INDUSTRIES	85.52	88.03	90.55	93.35	94.89	95.99	2.34

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
34. AIR TRAFFIC CONTROLLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
82. GOVERNMENT INDUSTRY	0.47	0.46	0.47	0.49	0.50	0.51	1.60
TOTAL, ALL INDUSTRIES	0.47	0.46	0.47	0.49	0.50	0.51	1.60
TOTAL EMPLOYMENT							
82. GOVERNMENT INDUSTRY	46.10	46.35	47.14	48.35	49.55	50.57	1.87
TOTAL, ALL INDUSTRIES	46.10	46.35	47.14	48.35	49.55	50.57	1.87
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
35. RADIO OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
65. TRANSPORTATION & WAREHOUSING	0.06	0.08	0.06	0.06	0.07	0.07	4.00
66. COMMUNICATION EXC. RADIO & TV	0.02	0.02	0.02	0.03	0.03	0.03	6.85
82. GOVERNMENT INDUSTRY	0.04	0.04	0.04	0.04	0.04	0.04	1.56
TOTAL, ALL INDUSTRIES	0.12	0.12	0.13	0.13	0.14	0.14	3.74
TOTAL EMPLOYMENT							
65. TRANSPORTATION & WAREHOUSING	1.30	1.33	1.35	1.37	1.38	1.37	1.09
66. COMMUNICATION EXC. RADIO & TV	0.85	0.87	0.91	0.93	0.97	0.99	3.09
82. GOVERNMENT INDUSTRY	2.50	2.48	2.49	2.50	2.52	2.56	0.44
TOTAL, ALL INDUSTRIES	4.79	4.81	4.88	4.95	5.01	5.06	1.13
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
36. TECHNICAL ASSISTANTS, LIBRARY  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
77. MISC. SERVICES	0.22	0.22	0.23	0.23	0.24	0.24	2.36
82. GOVERNMENT INDUSTRY	1.78	1.68	1.65	1.64	1.61	1.56	-2.60
TOTAL, ALL INDUSTRIES	1.99	1.90	1.88	1.87	1.85	1.80	-2.00
TOTAL EMPLOYMENT							
77. MISC. SERVICES	33.71	33.57	33.53	33.73	34.04	34.45	0.43
82. GOVERNMENT INDUSTRY	7.78	7.53	7.37	7.27	7.17	7.02	-2.06
TOTAL, ALL INDUSTRIES	41.50	41.11	40.91	41.01	41.22	41.47	-0.01
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
37. TOOL PROGRAMMERS-NUMERICAL CONTROL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.29	0.33	0.38	0.39	0.41	0.43	7.97
27. CHEMICALS & PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.04	7.95
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	7.53
41. SCREW MACHINE PROD.&STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.01	7.72
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	10.16
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.66
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.11
47. METALWORKING MACH. & EQ.	0.05	0.06	0.07	0.08	0.08	0.08	9.37
49. GENERAL INDUSTRY MACHINERY	0.02	0.02	0.03	0.03	0.03	0.03	7.51
50. MISC. NONELECTRICAL MACH.	0.03	0.04	0.04	0.04	0.05	0.05	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.02	0.02	0.02	0.02	0.02	0.02	7.33
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.06
56. RADIO, TV, & COMMUNICATION EQ.	0.13	0.15	0.17	0.18	0.19	0.20	8.25
57. ELECTRONIC COMPONENTS & ACCESS.	0.06	0.07	0.08	0.09	0.10	0.11	11.37
60. AIRCRAFT & PARTS	0.44	0.50	0.55	0.60	0.64	0.66	8.59
61. OTHER TRANSPORTATION EQ.	0.07	0.07	0.07	0.07	0.08	0.08	3.40
62. INSTRUMENTS & SUPPLIES	0.04	0.04	0.05	0.05	0.06	0.06	8.00
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	3.60
TOTAL, ALL INDUSTRIES	1.29	1.46	1.59	1.74	1.85	1.92	8.23
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.48	0.50	0.50	0.52	0.52	0.53	1.86
27. CHEMICALS & PRODUCTS	0.51	0.52	0.53	0.54	0.55	0.55	1.41
40. FAB. STRUCTURAL METAL PRODUCTS	0.29	0.29	0.30	0.31	0.32	0.32	1.80
41. SCREW MACHINE PROD.&STAMPINGS	0.14	0.15	0.15	0.16	0.16	0.18	2.19
42. OTHER FAB. METAL PRODUCTS	0.22	0.23	0.24	0.25	0.26	0.28	3.43
43. ENGINES & TURBINES	0.11	0.11	0.12	0.12	0.12	0.12	1.73
45. CONSTR. & MINING MACHINERY	0.45	0.48	0.50	0.52	0.54	0.54	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.18	0.17	0.18	0.18	0.19	0.19	3.62
47. METALWORKING MACH. & EQ.	1.05	1.09	1.18	1.20	1.24	1.28	3.77
49. GENERAL INDUSTRY MACHINERY	0.49	0.50	0.53	0.54	0.55	0.56	2.61
50. MISC. NONELECTRICAL MACH.	0.30	0.30	0.32	0.32	0.33	0.33	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	0.43	0.45	0.47	0.48	0.48	0.49	2.74
53. ELECTRICAL MACHINERY	0.14	0.14	0.15	0.15	0.15	0.15	2.01
56. RADIO, TV, & COMMUNICATION EQ.	0.31	0.32	0.33	0.34	0.34	0.34	2.10

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
37. TOOL PROGRAMMERS-NUMERICAL CONTROL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
57. ELECTRONIC COMPONENTS & ACCESS.	0.29	0.30	0.31	0.33	0.33	0.34	3.65
60. AIRCRAFT & PARTS	0.88	0.91	0.94	0.97	0.97	0.97	1.99
61. OTHER TRANSPORTATION EQ.	0.23	0.24	0.25	0.25	0.25	0.26	1.99
62. INSTRUMENTS & SUPPLIES	0.34	0.35	0.36	0.37	0.38	0.39	2.55
77. MISC. SERVICES	1.10	1.11	1.13	1.15	1.17	1.20	1.66
TOTAL, ALL INDUSTRIES	10.32	10.58	10.92	11.20	11.38	11.54	2.26

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
38. ALL OTHER TECHNICIANS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.02	0.02	0.02	0.02	11.52
8. CRUDE PETROLEUM & N. GAS	0.05	0.06	0.06	0.06	0.06	0.06	3.56
11. NEW CONSTRUCTION	0.04	0.04	0.05	0.05	0.06	0.06	8.60
13. ORDNANCE & ACCESSORIES	0.43	0.49	0.53	0.57	0.59	0.61	7.32
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	6.08
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.87
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.01	0.01	0.01	4.97
27. CHEMICALS & PRODUCTS	0.03	0.03	0.03	0.03	0.04	0.04	7.68
28. PLASTICS & SYNTHETIC MATLS.	0.03	0.04	0.04	0.05	0.05	0.05	8.70
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.24
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	5.32
32. RUBBER & MISC. PLASTICS PROD.	0.02	0.03	0.03	0.03	0.04	0.04	10.38
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.38
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.20
37. PRIMARY FERROUS METALS	0.02	0.03	0.03	0.03	0.03	0.04	7.43
38. NONFERROUS METALS	0.08	0.09	0.10	0.11	0.12	0.13	9.62
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	7.61
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.03	9.71
43. ENGINES & TURBINES	0.01	0.02	0.02	0.02	0.02	0.02	7.72
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.11
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.40
49. GENERAL INDUSTRY MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	7.53
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.61
53. ELECTRICAL MACHINERY	0.02	0.02	0.03	0.03	0.03	0.03	9.24
56. RADIO, TV, & COMMUNICATION EQ.	1.12	1.29	1.42	1.54	1.63	1.66	8.27
57. ELECTRONIC COMPONENTS & ACCESS.	0.09	0.11	0.13	0.14	0.15	0.16	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.02	0.02	17.15
60. AIRCRAFT & PARTS	0.82	0.92	1.02	1.12	1.20	1.23	8.59
61. OTHER TRANSPORTATION EQ.	0.12	0.13	0.13	0.13	0.14	0.14	3.38
62. INSTRUMENTS & SUPPLIES	0.11	0.12	0.13	0.14	0.15	0.15	7.70
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.04	0.04	0.04	0.05	0.05	0.06	8.49
65. TRANSPORTATION & WAREHOUSING	0.30	0.32	0.34	0.37	0.39	0.41	6.37
66. COMMUNICATION EXC. RADIO & TV	0.02	0.02	0.02	0.02	0.03	0.03	6.40
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.20
68. UTILITIES	0.08	0.09	0.10	0.10	0.11	0.11	6.01
69. WHOLESALE & RETAIL TRADE	0.06	0.06	0.07	0.08	0.09	0.09	10.00

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
38. ALL OTHER TECHNICIANS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN. % GROWTH 82 TO 87
70. FINANCE & INSURANCE	0.06	0.07	0.08	0.09	0.10	0.10	9.66
72. PERSONAL SERVICES EXC. AUTO.	0.33	0.37	0.40	0.43	0.46	0.49	8.21
76. AMUSEMENTS	0.01	0.02	0.02	0.02	0.02	0.02	7.55
77. MISC. SERVICES	0.06	0.06	0.06	0.07	0.07	0.07	4.74
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.11	0.11	0.11	0.12	0.12	0.12	2.37
82. GOVERNMENT INDUSTRY	8.00	7.87	8.05	8.30	8.47	8.56	1.35
TOTAL, ALL INDUSTRIES	12.30	12.70	13.31	14.02	14.54	14.83	3.81
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.21	0.23	0.24	0.25	0.24	0.25	2.90
8. CRUDE PETROLEUM & N. GAS	0.73	0.73	0.72	0.70	0.69	0.69	-1.19
11. NEW CONSTRUCTION	1.04	1.06	1.08	1.11	1.14	1.16	2.17
13. ORONANCE & ACCESSORIES	0.71	0.73	0.74	0.75	0.75	0.76	1.25
16. FABRIC, YARN & THREAD MILLS	0.61	0.63	0.66	0.68	0.69	0.69	2.66
24. PAPER & ALLIED PRODUCTS	0.52	0.54	0.55	0.55	0.55	0.55	1.03
26. PRINTING & PUBLISHING	0.72	0.71	0.71	0.71	0.70	0.70	-0.59
27. CHEMICALS & PRODUCTS	0.53	0.54	0.55	0.56	0.56	0.56	1.16
28. PLASTICS & SYNTHETIC MATLS.	1.38	1.43	1.49	1.52	1.54	1.55	2.31
30. PAINTS & ALLIED PRODUCTS	0.11	0.11	0.12	0.12	0.13	0.13	3.02
31. PET REFINING & REL. PROO.	0.21	0.21	0.21	0.21	0.21	0.21	0.38
32. RUBBER & MISC. PLASTICS PROO.	0.84	0.86	0.90	0.93	0.96	0.97	2.95
35. GLASS & GLASS PRODUCTS	0.26	0.26	0.26	0.26	0.26	0.25	-0.25
36. STONE & CLAY PRODUCTS	0.31	0.31	0.32	0.33	0.33	0.32	0.97
37. PRIMARY FERROUS METALS	0.35	0.36	0.37	0.37	0.37	0.37	1.09
38. NONFERROUS METALS	0.96	1.00	1.04	1.07	1.09	1.11	3.01
40. FAB. STRUCTURAL METAL PRODUCTS	0.69	0.69	0.71	0.73	0.75	0.76	1.88
42. OTHER FAB. METAL PRODUCTS	0.35	0.36	0.37	0.38	0.39	0.40	3.01
43. ENGINES & TURBINES	0.17	0.17	0.18	0.18	0.18	0.18	1.78
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.12	0.13	0.14	0.14	0.14	3.62
47. METALWORKING MACH. & EQ.	0.16	0.17	0.18	0.19	0.19	0.20	3.80
49. GENERAL INDUSTRY MACHINERY	0.31	0.32	0.33	0.34	0.35	0.35	2.63
50. MISC. NONELECTRICAL MACH.	0.07	0.07	0.08	0.08	0.08	0.08	2.30
53. ELECTRICAL MACHINERY	0.43	0.44	0.46	0.47	0.48	0.48	2.18
56. RADIO, TV, & COMMUNICATION EQ.	2.65	2.72	2.81	2.86	2.89	2.94	2.11
57. ELECTRONIC COMPONENTS & ACCESS.	0.43	0.45	0.47	0.49	0.51	0.52	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.35	0.36	0.37	0.38	0.38	0.39	2.13
59. MOTOR VEHICLES & EQUIPMENT	0.47	0.49	0.51	0.51	0.52	0.52	2.23
60. AIRCRAFT & PARTS	1.63	1.70	1.74	1.80	1.80	1.80	2.00

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INOUSTRY MOOEL  
ESTIMATES OF INOUSTRIAL EMPLOYMENT BY OCCUPATION  
38. ALL OTHER TECHNICIANS NEC  
(THOUSANOS OF PERSONS)

INOUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
61. OTHER TRANSPORTATION EQ.	0.41	0.42	0.44	0.45	0.45	0.45	1.96
62. INSTRUMENTS & SUPPLIES	0.91	0.93	0.96	0.99	1.01	1.02	2.27
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	0.86	0.87	0.90	0.94	0.97	1.00	3.13
65. TRANSPORTATION & WAREHOUSING	7.07	7.37	7.67	8.00	8.20	8.35	3.39
66. COMMUNICATION EXC. RADIO & TV	0.77	0.78	0.81	0.83	0.86	0.88	2.66
67. RADIO & TV BROAOCASTING	0.31	0.32	0.33	0.33	0.33	0.34	1.76
68. UTILITIES	3.77	3.78	3.78	3.78	3.79	3.79	0.06
69. WHOLESALE & RETAIL TRAOE	9.34	9.68	10.02	10.31	10.55	10.80	2.93
70. FINANCE & INSURANCE	7.39	7.54	7.72	7.94	8.17	8.39	2.56
72. PERSONAL SERVICES EXC. AUTO.	17.85	18.10	18.43	18.76	19.10	19.40	1.68
76. AMUSEMENTS	1.53	1.53	1.56	1.59	1.61	1.64	1.41
77. MISC. SERVICES	9.12	9.31	9.52	9.80	10.12	10.46	2.77
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.77	0.78	0.79	0.81	0.82	0.84	1.75
82. GOVERNMENT INOUSTRY	37.48	37.27	37.48	37.91	38.36	38.90	0.75
TOTAL, ALL INOUSTRIES	117.79	119.43	121.76	124.26	126.39	128.45	1.75

NOTE: INOUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
39. COMPUTER SPECIALISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.01	0.01	0.01	0.01	0.01	0.01	8.51
6. NONFERROUS METAL MINING	0.01	0.01	0.02	0.02	0.02	0.02	10.57
7. COAL MINING	0.01	0.01	0.01	0.01	0.02	0.02	9.23
8. CRUDE PETROLEUM & N. GAS	0.21	0.23	0.25	0.28	0.30	0.32	9.18
11. NEW CONSTRUCTION	0.09	0.11	0.12	0.13	0.14	0.15	10.08
13. ORNANCE & ACCESSORIES	2.21	2.60	2.93	3.27	3.55	3.79	11.38
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.27
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	6.46
18. APPAREL	0.01	0.01	0.01	0.01	0.01	0.01	7.86
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.81
24. PAPER & ALLIED PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.04	9.37
26. PRINTING & PUBLISHING	0.07	0.08	0.09	0.10	0.10	0.11	7.57
27. CHEMICALS & PRODUCTS	0.16	0.18	0.19	0.22	0.24	0.25	10.09
28. PLASTICS & SYNTHETIC MATLS.	0.03	0.04	0.04	0.05	0.05	0.06	13.14
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.02	0.02	0.02	0.02	7.54
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.26
31. PET REFINING & REL. PROD.	0.10	0.12	0.14	0.15	0.17	0.19	12.43
32. RUBBER & MISC. PLASTICS PROD.	0.04	0.04	0.05	0.06	0.06	0.07	11.84
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.60
36. STONE & CLAY PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	7.65
37. PRIMARY FERROUS METALS	0.12	0.13	0.15	0.16	0.18	0.19	9.60
38. NONFERROUS METALS	0.09	0.11	0.12	0.14	0.15	0.16	12.19
40. FAB. STRUCTURAL METAL PRODUCTS	0.08	0.09	0.10	0.10	0.11	0.12	9.42
41. SCREW MACHINE PROD. & STAMPINGS	0.03	0.03	0.04	0.04	0.04	0.04	7.74
42. OTHER FAB. METAL PRODUCTS	0.04	0.05	0.05	0.06	0.07	0.07	10.06
43. ENGINES & TURBINES	0.06	0.07	0.08	0.09	0.09	0.10	10.33
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	10.07
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.03	0.04	0.04	0.05	0.05	12.00
47. METALWORKING MACH. & EQ.	0.05	0.06	0.07	0.08	0.09	0.09	11.69
49. GENERAL INDUSTRY MACHINERY	0.06	0.06	0.07	0.07	0.08	0.08	8.60
50. MISC. NONELECTRICAL MACH.	0.02	0.03	0.03	0.03	0.03	0.03	7.55
51. OFFICE, COMPUTING & ACCT. MACH.	0.94	1.09	1.20	1.30	1.37	1.42	8.60
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.02	0.02	0.02	16.38
53. ELECTRICAL MACHINERY	0.08	0.09	0.10	0.11	0.12	0.13	10.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.04	0.04	0.05	0.05	0.05	9.16
56. RADIO, TV, & COMMUNICATION EQ.	3.39	4.08	4.68	5.28	5.77	6.10	12.47
57. ELECTRONIC COMPONENTS & ACCESS.	0.61	0.75	0.87	1.01	1.13	1.22	14.94

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
39. COMPUTER SPECIALISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.02	0.03	0.03	0.03	12.58
59. MOTOR VEHICLES & EQUIPMENT	0.05	0.05	0.06	0.07	0.09	0.10	17.28
60. AIRCRAFT & PARTS	2.85	3.38	3.90	4.49	5.00	5.33	13.35
61. OTHER TRANSPORTATION EQ.	0.18	0.20	0.20	0.21	0.22	0.22	4.13
62. INSTRUMENTS & SUPPLIES	0.55	0.63	0.69	0.76	0.82	0.85	9.07
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.05	0.05	0.06	0.07	0.07	0.08	11.44
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	8.92
65. TRANSPORTATION & WAREHOUSING	0.29	0.32	0.34	0.37	0.39	0.41	7.09
66. COMMUNICATION EXC. RADIO & TV	0.22	0.24	0.26	0.29	0.32	0.34	9.35
67. RADIO & TV BROADCASTING	0.02	0.02	0.03	0.03	0.03	0.03	10.15
68. UTILITIES	0.16	0.18	0.20	0.22	0.24	0.25	9.14
69. WHOLESALE & RETAIL TRADE	0.33	0.38	0.43	0.48	0.54	0.57	11.92
70. FINANCE & INSURANCE	0.48	0.55	0.62	0.70	0.78	0.83	11.59
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	10.05
72. PERSONAL SERVICES EXC. AUTO.	0.02	0.02	0.03	0.03	0.03	0.04	12.42
73. BUSINESS SERVICES	4.03	4.76	5.46	6.28	6.99	7.52	13.31
77. MISC. SERVICES	0.36	0.39	0.42	0.45	0.49	0.51	7.26
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.27	0.30	0.33	0.36	0.38	0.40	8.33
82. GOVERNMENT INDUSTRY	22.32	23.15	24.87	26.84	28.56	30.02	6.10
TOTAL, ALL INDUSTRIES	40.97	45.01	49.63	54.81	59.26	62.71	8.89

• TOTAL EMPLOYMENT

5. IRON ORE MINING	0.14	0.15	0.16	0.16	0.16	0.16	2.31
6. NONFERROUS METAL MINING	0.21	0.22	0.23	0.24	0.24	0.24	2.03
7. COAL MINING	0.36	0.38	0.40	0.41	0.42	0.43	3.53
8. CRUDE PETROLEUM & N. GAS	2.78	2.93	3.07	3.15	3.25	3.41	4.17
11. NEW CONSTRUCTION	2.50	2.59	2.67	2.79	2.90	2.97	3.57
13. ORNANCE & ACCESSORIES	3.66	3.88	4.09	4.32	4.51	4.69	5.08
14. FOOD & KINOREO PRODUCTS	1.73	1.78	1.77	1.77	1.75	1.74	0.14
16. FABRIC, YARN & THREAO MILLS	0.58	0.60	0.63	0.65	0.66	0.67	3.02
18. APPAREL	1.40	1.43	1.49	1.55	1.57	1.60	2.74
20. LUMBER & WOOD PRODUCTS	0.39	0.44	0.46	0.49	0.50	0.50	4.90
24. PAPER & ALLIED PRODUCTS	1.24	1.31	1.36	1.40	1.43	1.46	3.39
26. PRINTING & PUBLISHING	4.68	4.77	4.87	4.97	5.06	5.14	1.88
27. CHEMICALS & PRODUCTS	3.25	3.40	3.53	3.65	3.75	3.84	3.42
28. PLASTICS & SYNTHETIC MATLS.	1.30	1.40	1.52	1.62	1.70	1.77	6.49
29. DRUGS, CLEANING & TOILET PREP.	3.84	4.01	4.21	4.40	4.54	4.68	4.02
30. PAINTS & ALLIED PRODUCTS	0.14	0.15	0.15	0.16	0.16	0.16	3.03



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
39. COMPUTER SPECIALISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
31. PET REFINING & REL. PROD.	1.95	2.09	2.26	2.43	2.60	2.75	7.15
32. RUBBER & MISC. PLASTICS PROD.	1.40	1.47	1.55	1.63	1.69	1.73	4.31
35. GLASS & GLASS PRODUCTS	0.29	0.29	0.30	0.30	0.30	0.30	0.87
36. STONE & CLAY PRODUCTS	0.65	0.66	0.67	0.68	0.68	0.66	0.46
37. PRIMARY FERROUS METALS	1.66	1.75	1.83	1.89	1.92	1.94	3.13
38. NONFERROUS METALS	1.07	1.14	1.22	1.29	1.34	1.39	5.42
40. FAB. STRUCTURAL METAL PRODUCTS	1.72	1.76	1.83	1.92	1.99	2.05	3.59
41. SCREW MACHINE PROD.&STAMPINGS	0.48	0.50	0.52	0.53	0.53	0.53	2.21
42. OTHER FAB. METAL PRODUCTS	0.95	0.98	1.02	1.06	1.09	1.11	3.33
43. ENGINES & TURBINES	0.72	0.76	0.81	0.84	0.87	0.89	4.25
45. CONSTR. & MINING MACHINERY	1.39	1.52	1.64	1.74	1.83	1.90	6.38
46. MATERIALS HANDLING MACH. & EQ.	0.50	0.53	0.58	0.62	0.65	0.68	6.35
47. METALWORKING MACH. & EQ.	1.01	1.08	1.17	1.24	1.30	1.35	5.97
49. GENERAL INDUSTRY MACHINERY	1.27	1.31	1.39	1.44	1.48	1.52	3.65
50. MISC. NONELECTRICAL MACH.	0.21	0.21	0.22	0.22	0.23	0.23	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	24.89	26.24	27.69	28.53	29.24	30.21	3.95
52. SERVICE INDUSTRY MACHINES	0.57	0.61	0.66	0.69	0.71	0.72	4.82
53. ELECTRICAL MACHINERY	1.57	1.62	1.71	1.77	1.81	1.85	3.37
55. ELECTRIC LIGHTING & WIRING EQ.	0.72	0.73	0.76	0.78	0.80	0.82	2.55
56. RADIO, TV, & COMMUNICATION EQ.	8.03	8.60	9.25	9.79	10.25	10.79	6.08
57. ELECTRONIC COMPONENTS & ACCESS.	2.78	3.01	3.26	3.50	3.71	3.89	6.97
58. MISC. ELECTRICAL MACH. & EQ.	0.62	0.66	0.71	0.74	0.77	0.79	4.93
59. MOTOR VEHICLES & EQUIPMENT	2.35	2.46	2.55	2.59	2.62	2.64	2.35
60. AIRCRAFT & PARTS	5.71	6.22	6.69	7.20	7.52	7.81	6.47
61. OTHER TRANSPORTATION EQ.	0.63	0.66	0.69	0.71	0.71	0.72	2.71
62. INSTRUMENTS & SUPPLIES	4.76	4.88	5.11	5.35	5.54	5.67	3.57
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.08	1.13	1.21	1.30	1.38	1.45	5.93
64. MISC. MANUFACTURING	0.82	0.86	0.92	0.97	1.01	1.04	4.77
65. TRANSPORTATION & WAREHOUSING	6.86	7.21	7.55	7.93	8.18	8.38	4.09
66. COMMUNICATION EXC. RADIO & TV	8.74	9.20	9.82	10.31	10.94	11.43	5.50
67. RADIO & TV BROADCASTING	1.02	1.08	1.13	1.16	1.19	1.22	3.60
68. UTILITIES	7.54	7.80	8.04	8.28	8.52	8.75	3.02
69. WHOLESALE & RETAIL TRADE	53.49	56.52	59.57	62.38	64.86	67.39	4.73
70. FINANCE & INSURANCE	55.81	58.06	60.53	63.34	66.25	69.09	4.36
71. REAL ESTATE & RENTAL	0.34	0.35	0.36	0.38	0.39	0.40	3.58
72. PERSONAL SERVICES EXC. AUTO.	1.13	1.19	1.27	1.34	1.41	1.48	5.65
73. BUSINESS SERVICES	82.98	90.07	97.54	105.66	113.24	120.14	7.68
77. MISC. SERVICES	56.17	58.92	61.81	65.14	68.72	72.53	5.25
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.55	4.79	5.06	5.32	5.57	5.82	5.04

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
39. COMPUTER SPECIALISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	82.46	85.70	89.88	94.75	99.67	104.56	4.86
TOTAL, ALL INDUSTRIES	464.41	489.61	517.25	545.56	572.40	598.57	5.21

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
40. COMPUTER PROGRAMMERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	10.33
8. CRUDE PETROLEUM & N. GAS	0.08	0.09	0.09	0.10	0.11	0.11	6.87
11. NEW CONSTRUCTION	0.05	0.05	0.06	0.06	0.07	0.07	9.83
13. ORDNANCE & ACCESSORIES	0.79	0.89	0.98	1.06	1.12	1.17	8.14
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.42
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.69
26. PRINTING & PUBLISHING	0.04	0.05	0.05	0.06	0.06	0.06	6.68
27. CHEMICALS & PRODUCTS	0.07	0.07	0.08	0.08	0.09	0.09	7.42
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.02	0.02	0.02	0.02	0.02	8.72
31. PET REFINING & REL. PROD.	0.04	0.04	0.04	0.05	0.05	0.06	9.94
32. RUBBER & MISC. PLASTICS PROO.	0.02	0.02	0.03	0.03	0.03	0.03	10.29
36. STONE & CLAY PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	7.74
37. PRIMARY FERROUS METALS	0.05	0.06	0.06	0.07	0.07	0.07	7.46
38. NONFERROUS METALS	0.04	0.04	0.05	0.05	0.06	0.06	9.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.05	0.05	0.06	0.06	0.06	7.89
41. SCREW MACHINE PROO. & STAMPINGS	0.02	0.02	0.02	0.02	0.03	0.03	7.75
42. OTHER FAB. METAL PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	10.04
43. ENGINES & TURBINES	0.03	0.04	0.04	0.05	0.05	0.05	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.58
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.02	0.02	0.02	10.48
47. METALWORKING MACH. & EQ.	0.03	0.04	0.04	0.05	0.05	0.05	9.37
49. GENERAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.04	0.04	0.05	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.03	0.03	0.03	7.56
51. OFFICE, COMPUTING & ACCT. MACH.	0.69	0.80	0.88	0.95	1.00	1.04	8.47
53. ELECTRICAL MACHINERY	0.04	0.05	0.05	0.06	0.06	0.07	9.12
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.02	0.02	0.03	0.03	0.03	8.26
56. RADIO, TV, & COMMUNICATION EQ.	1.37	1.62	1.83	2.04	2.20	2.31	10.97
57. ELECTRONIC COMPONENTS & ACCESS.	0.38	0.47	0.54	0.62	0.70	0.75	14.23
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.02	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.03	0.03	0.03	0.04	0.05	0.06	17.15
60. AIRCRAFT & PARTS	1.19	1.38	1.56	1.77	1.94	2.04	11.31
61. OTHER TRANSPORTATION EQ.	0.08	0.09	0.09	0.09	0.10	0.10	3.30
62. INSTRUMENTS & SUPPLIES	0.41	0.46	0.50	0.54	0.58	0.59	7.78
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.03	0.03	0.03	0.03	0.03	8.65
65. TRANSPORTATION & WAREHOUSING	0.14	0.15	0.16	0.18	0.19	0.19	6.19
66. COMMUNICATION EXC. RADIO & TV	0.10	0.11	0.11	0.12	0.13	0.14	6.22
67. RADIO & TV BROADCASTING	0.01	0.01	0.02	0.02	0.02	0.02	9.44

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
40. COMPUTER PROGRAMMERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	0.08	0.09	0.09	0.10	0.11	0.11	7.54
69. WHOLESALE & RETAIL TRADE	0.13	0.15	0.17	0.19	0.21	0.22	10.63
70. FINANCE & INSURANCE	0.26	0.30	0.33	0.37	0.41	0.43	10.68
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.02	0.02	14.19
73. BUSINESS SERVICES	2.30	2.71	3.11	3.56	3.96	4.26	13.10
77. MISC. SERVICES	0.23	0.25	0.27	0.29	0.31	0.33	6.94
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.11	0.12	0.13	0.14	0.15	0.15	7.84
82. GOVERNMENT INDUSTRY	17.86	18.52	19.90	21.47	22.85	24.01	6.10
TOTAL, ALL INDUSTRIES	27.01	29.11	31.74	34.70	37.22	39.17	7.72
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.10	0.11	0.11	0.11	0.11	0.11	1.80
8. CRUDE PETROLEUM & N. GAS	1.07	1.09	1.12	1.13	1.14	1.17	1.96
11. NEW CONSTRUCTION	1.22	1.26	1.30	1.36	1.41	1.44	3.34
13. ORDNANCE & ACCESSORIES	1.30	1.34	1.37	1.40	1.42	1.44	2.02
14. FOOD & KINDRED PRODUCTS	1.00	1.01	1.02	1.02	1.02	1.01	0.29
24. PAPER & ALLIED PRODUCTS	0.58	0.59	0.60	0.60	0.60	0.60	0.86
26. PRINTING & PUBLISHING	2.80	2.83	2.86	2.90	2.92	2.95	1.03
27. CHEMICALS & PRODUCTS	1.36	1.38	1.40	1.41	1.42	1.42	0.91
28. PLASTICS & SYNTHETIC MATLS.	0.56	0.58	0.60	0.62	0.63	0.63	2.33
31. PET REFINING & REL. PROD.	0.66	0.69	0.73	0.77	0.80	0.84	4.78
32. RUBBER & MISC. PLASTICS PROD.	0.75	0.77	0.81	0.83	0.85	0.86	2.86
36. STONE & CLAY PRODUCTS	0.40	0.41	0.41	0.42	0.42	0.42	0.54
37. PRIMARY FERROUS METALS	0.72	0.74	0.76	0.77	0.77	0.76	1.11
38. NONFERROUS METALS	0.45	0.46	0.48	0.50	0.51	0.52	3.00
40. FAB. STRUCTURAL METAL PRODUCTS	0.95	0.95	0.98	1.01	1.04	1.05	2.14
41. SCREW MACHINE PROD. & STAMPINGS	0.30	0.31	0.32	0.33	0.33	0.33	2.21
42. OTHER FAB. METAL PRODUCTS	0.57	0.59	0.62	0.64	0.66	0.67	3.32
43. ENGINES & TURBINES	0.41	0.42	0.44	0.45	0.45	0.45	1.77
45. CONSTR. & MINING MACHINERY	0.74	0.79	0.85	0.89	0.92	0.94	4.93
46. MATERIALS HANDLING MACH. & EQ.	0.26	0.28	0.30	0.31	0.33	0.34	4.91
47. METALWORKING MACH. & EQ.	0.67	0.69	0.74	0.77	0.79	0.80	3.77
49. GENERAL INDUSTRY MACHINERY	0.74	0.76	0.80	0.82	0.83	0.84	2.61
50. MISC. NONELECTRICAL MACH.	0.17	0.17	0.18	0.19	0.19	0.19	2.25
51. OFFICE, COMPUTING & ACCT. MACH.	18.34	19.30	20.34	20.93	21.44	22.12	3.82
53. ELECTRICAL MACHINERY	0.85	0.86	0.90	0.92	0.93	0.94	2.06
55. ELECTRIC LIGHTING & WIRING EQ.	0.39	0.40	0.41	0.42	0.42	0.43	1.71
56. RADIO, TV, & COMMUNICATION EQ.	3.24	3.42	3.62	3.78	3.91	4.07	4.66

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
40. COMPUTER PROGRAMMERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
57. ELECTRONIC COMPONENTS & ACCESS.	1.75	1.88	2.03	2.17	2.28	2.38	6.31
58. MISC. ELECTRICAL MACH. & EQ.	0.35	0.37	0.38	0.39	0.39	0.39	2.12
59. MOTOR VEHICLES & EQUIPMENT	1.30	1.35	1.40	1.42	1.44	1.45	2.24
60. AIRCRAFT & PARTS	2.39	2.55	2.69	2.84	2.92	2.98	4.55
61. OTHER TRANSPORTATION EQ.	0.29	0.30	0.31	0.31	0.31	0.32	1.89
62. INSTRUMENTS & SUPPLIES	3.51	3.55	3.68	3.80	3.89	3.94	2.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.53	0.54	0.56	0.59	0.61	0.63	3.28
65. TRANSPORTATION & WAREHOUSING	3.38	3.52	3.66	3.81	3.90	3.96	3.22
66. COMMUNICATION EXC. RADIO & TV	4.03	4.10	4.24	4.33	4.47	4.55	2.48
67. RADIO & TV BROADCASTING	0.65	0.68	0.71	0.73	0.74	0.75	2.93
68. UTILITIES	3.62	3.68	3.73	3.79	3.84	3.90	1.50
69. WHOLESALE & RETAIL TRADE	21.83	22.76	23.69	24.53	25.23	25.95	3.52
70. FINANCE & INSURANCE	30.37	31.29	32.34	33.56	34.84	36.08	3.51
72. PERSONAL SERVICES EXC. AUTO.	0.51	0.55	0.59	0.64	0.68	0.73	7.30
73. BUSINESS SERVICES	47.41	51.33	55.48	59.99	64.19	68.01	7.48
77. MISC. SERVICES	36.12	37.75	39.47	41.48	43.64	45.95	4.93
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.99	2.08	2.19	2.29	2.38	2.47	4.43
82. GOVERNMENT INDUSTRY	65.96	68.56	71.91	75.80	79.73	83.65	4.86
TOTAL, ALL INDUSTRIES	273.69	286.38	300.65	315.44	329.53	343.30	4.64

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
41. COMPUTER SYSTEMS ANALYSTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	10.80
8. CRUDE PETROLEUM & N. GAS	0.13	0.14	0.16	0.18	0.20	0.21	10.52
11. NEW CONSTRUCTION	0.05	0.05	0.06	0.07	0.07	0.08	10.31
13. ORNANCE & ACCESSORIES	1.42	1.70	1.95	2.21	2.43	2.63	13.03
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	11.51
26. PRINTING & PUBLISHING	0.03	0.03	0.04	0.04	0.04	0.05	8.86
27. CHEMICALS & PRODUCTS	0.09	0.10	0.12	0.13	0.15	0.16	11.86
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.03	0.03	0.03	0.04	16.10
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.01	9.11
31. PET REFINING & REL. PROD.	0.07	0.08	0.09	0.11	0.12	0.13	13.63
32. RUBBER & MISC. PLASTICS PROD.	0.02	0.02	0.02	0.03	0.03	0.03	13.52
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.50
37. PRIMARY FERROUS METALS	0.07	0.08	0.09	0.10	0.11	0.11	11.15
38. NONFERROUS METALS	0.05	0.06	0.07	0.08	0.09	0.10	13.90
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.06	11.20
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.01	0.01	0.01	0.02	0.02	7.73
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	10.08
43. ENGINES & TURBINES	0.03	0.03	0.04	0.04	0.04	0.05	13.47
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	11.87
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.02	0.02	0.02	0.02	0.03	13.62
47. METALWORKING MACH. & EQ.	0.02	0.02	0.03	0.03	0.03	0.04	15.68
49. GENERAL INDUSTRY MACHINERY	0.02	0.03	0.03	0.03	0.04	0.04	10.06
51. OFFICE, COMPUTING & ACCT. MACH.	0.25	0.29	0.32	0.35	0.36	0.38	8.97
53. ELECTRICAL MACHINERY	0.04	0.04	0.05	0.05	0.06	0.06	12.08
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.02	0.02	0.02	0.02	0.03	10.21
56. RADIO, TV, & COMMUNICATION EQ.	2.02	2.46	2.85	3.24	3.56	3.80	13.44
57. ELECTRONIC COMPONENTS & ACCESS.	0.22	0.28	0.33	0.39	0.44	0.47	16.11
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.02	16.13
59. MOTOR VEHICLES & EQUIPMENT	0.02	0.02	0.03	0.03	0.04	0.05	17.43
60. AIRCRAFT & PARTS	1.66	2.00	2.33	2.72	3.06	3.29	14.74
61. OTHER TRANSPORTATION EQ.	0.10	0.11	0.11	0.12	0.12	0.13	4.81
62. INSTRUMENTS & SUPPLIES	0.15	0.17	0.19	0.22	0.24	0.26	12.38
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.03	0.03	0.04	0.04	0.05	13.90
65. TRANSPORTATION & WAREHOUSING	0.15	0.16	0.18	0.19	0.21	0.22	7.94
66. COMMUNICATION EXC. RADIO & TV	0.12	0.13	0.15	0.17	0.19	0.20	11.76
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	11.35
68. UTILITIES	0.08	0.10	0.11	0.12	0.13	0.14	10.53

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
41. COMPUTER SYSTEMS ANALYSTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG ANN % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	0.19	0.23	0.26	0.29	0.33	0.35	12.78
70. FINANCE & INSURANCE	0.22	0.25	0.29	0.33	0.37	0.40	12.64
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.02	0.02	0.02	10.88
73. BUSINESS SERVICES	1.73	2.05	2.35	2.71	3.03	3.26	13.59
77. MISC. SERVICES	0.13	0.14	0.15	0.16	0.18	0.19	7.82
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.17	0.18	0.20	0.22	0.24	0.25	8.76
82. GOVERNMENT INDUSTRY	4.46	4.63	4.97	5.37	5.71	6.00	6.10
TOTAL, ALL INDUSTRIES	13.96	15.91	17.90	20.12	22.05	23.54	11.02
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.11	0.12	0.12	0.12	0.12	0.12	2.23
8. CRUDE PETROLEUM & N. GAS	1.72	1.83	1.95	2.02	2.11	2.24	5.45
11. NEW CONSTRUCTION	1.27	1.32	1.37	1.44	1.49	1.53	3.78
13. ORDNANCE & ACCESSORIES	2.36	2.55	2.73	2.92	3.09	3.25	6.63
24. PAPER & ALLIED PRODUCTS	0.66	0.72	0.76	0.79	0.83	0.86	5.42
26. PRINTING & PUBLISHING	1.88	1.94	2.01	2.08	2.13	2.19	3.09
27. CHEMICALS & PRODUCTS	1.89	2.01	2.13	2.24	2.33	2.42	5.09
28. PLASTICS & SYNTHETIC MATLS.	0.74	0.82	0.91	1.00	1.08	1.15	9.27
29. DRUGS, CLEANING & TOILET PREP.	2.54	2.70	2.88	3.05	3.19	3.33	5.55
31. PET REFINING & REL. PROD.	1.29	1.40	1.53	1.66	1.79	1.92	8.30
32. RUBBER & MISC. PLASTICS PROD.	0.65	0.70	0.75	0.80	0.84	0.87	5.87
36. STONE & CLAY PRODUCTS	0.25	0.25	0.25	0.26	0.25	0.25	0.31
37. PRIMARY FERROUS METALS	0.94	1.00	1.07	1.12	1.15	1.18	4.58
38. NONFERROUS METALS	0.62	0.67	0.73	0.79	0.83	0.87	7.04
40. FAB. STRUCTURAL METAL PRODUCTS	0.77	0.80	0.85	0.91	0.96	1.00	5.27
41. SCREW MACHINE PROD. & STAMPINGS	0.18	0.19	0.20	0.20	0.20	0.20	2.20
42. OTHER FAB. METAL PRODUCTS	0.38	0.39	0.41	0.42	0.43	0.44	3.35
43. ENGINES & TURBINES	0.31	0.34	0.37	0.40	0.42	0.44	7.22
45. CONSTR. & MINING MACHINERY	0.65	0.72	0.80	0.86	0.91	0.95	7.92
46. MATERIALS HANDLING MACH. & EQ.	0.23	0.25	0.28	0.30	0.32	0.34	7.90
47. METALWORKING MACH. & EQ.	0.35	0.38	0.43	0.48	0.51	0.55	9.76
49. GENERAL INDUSTRY MACHINERY	0.53	0.55	0.60	0.63	0.65	0.67	5.05
51. OFFICE, COMPUTING & ACCT. MACH.	6.55	6.93	7.35	7.59	7.81	8.09	4.31
53. ELECTRICAL MACHINERY	0.72	0.75	0.81	0.85	0.88	0.91	4.84
55. ELECTRIC LIGHTING & WIRING EQ.	0.32	0.33	0.35	0.36	0.38	0.39	3.54
56. RADIO, TV, & COMMUNICATION EQ.	4.79	5.18	5.63	6.01	6.33	6.71	6.99
57. ELECTRONIC COMPONENTS & ACCESS.	1.03	1.12	1.23	1.34	1.43	1.51	8.08
58. MISC. ELECTRICAL MACH. & EQ.	0.27	0.30	0.33	0.35	0.37	0.40	8.24

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
41. COMPUTER SYSTEMS ANALYSTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
59. MOTOR VEHICLES & EQUIPMENT	1.06	1.11	1.15	1.17	1.18	1.19	2.48
60. AIRCRAFT & PARTS	3.32	3.68	4.00	4.36	4.60	4.82	7.77
61. OTHER TRANSPORTATION EQ.	0.34	0.36	0.38	0.39	0.40	0.41	3.38
62. INSTRUMENTS & SUPPLIES	1.25	1.33	1.44	1.55	1.65	1.73	6.71
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.55	0.59	0.65	0.71	0.77	0.82	8.27
65. TRANSPORTATION & WAREHOUSING	3.47	3.68	3.89	4.12	4.28	4.42	4.92
66. COMMUNICATION EXC. RADIO & TV	4.72	5.10	5.58	5.98	6.47	6.88	7.83
67. RADIO & TV BROADCASTING	0.37	0.40	0.42	0.44	0.45	0.47	4.73
68. UTILITIES	3.93	4.12	4.31	4.49	4.68	4.85	4.33
69. WHOLESALE & RETAIL TRADE	31.66	33.76	35.88	37.85	39.63	41.44	5.53
70. FINANCE & INSURANCE	25.44	26.77	28.19	29.77	31.41	33.01	5.35
72. PERSONAL SERVICES EXC. AUTO.	0.62	0.64	0.67	0.70	0.73	0.76	4.20
73. BUSINESS SERVICES	35.57	38.73	42.06	45.67	49.05	52.14	7.95
77. MISC. SERVICES	20.05	21.17	22.34	23.66	25.08	26.58	5.60
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.56	2.72	2.89	3.06	3.22	3.38	5.70
82. GOVERNMENT INDUSTRY	16.48	17.14	17.98	18.95	19.93	20.91	4.86
TOTAL, ALL INDUSTRIES	190.73	203.24	216.62	230.15	242.91	255.31	6.01

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
42. SOCIAL SCIENT.&OTHER PROFESSIONALS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.04	0.04	0.04	0.04	0.05	0.05	7.43
2. OTHER AGRICULTURAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	1.37
3. FORESTRY & FISHERY PRODUCTS	0.09	0.09	0.10	0.10	0.11	0.11	5.44
4. AGR., FORESTRY, & FISHERY SERV.	0.09	0.10	0.10	0.11	0.12	0.12	6.69
5. IRON ORE MINING	0.03	0.03	0.03	0.04	0.04	0.04	8.33
6. NONFERROUS METAL MINING	0.08	0.09	0.10	0.11	0.12	0.13	10.68
7. COAL MINING	0.08	0.09	0.10	0.11	0.12	0.12	8.96
8. CRUDE PETROLEUM & N. GAS	1.11	1.20	1.25	1.33	1.41	1.44	5.26
9. STONE & CLAY MINING & QUARRYING	0.03	0.04	0.04	0.04	0.05	0.05	10.12
10. CHEM & FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.98
11. NEW CONSTRUCTION	3.48	3.95	4.25	4.71	5.08	5.34	8.94
13. ORNANCE & ACCESSORIES	14.39	16.35	17.90	19.43	20.58	21.44	8.30
14. FOOD & KINDRED PRODUCTS	0.13	0.14	0.14	0.15	0.16	0.16	5.38
16. FABRIC, YARN & THREAD MILLS	0.04	0.04	0.05	0.05	0.05	0.05	4.85
17. MISC. TEXTILE GOODS	0.02	0.02	0.02	0.03	0.03	0.03	7.68
18. APPAREL	0.04	0.04	0.04	0.04	0.05	0.05	6.18
19. MISC. FABRICATED TEXTILE PROD.	0.05	0.06	0.06	0.06	0.07	0.07	4.68
20. LUMBER & WOOD PRODUCTS	0.13	0.15	0.16	0.17	0.19	0.20	9.60
21. WOOD CONTAINERS	0.02	0.02	0.02	0.03	0.03	0.03	9.83
22. HOUSEHOLD FURNITURE	0.02	0.02	0.03	0.03	0.03	0.03	3.96
23. OTHER FURNITURE & FIXTURES	0.04	0.04	0.05	0.05	0.05	0.05	4.47
24. PAPER & ALLIED PRODUCTS	0.17	0.19	0.21	0.22	0.23	0.24	6.75
25. PAPERBOARD CONTAINERS & BOXES	0.07	0.08	0.09	0.10	0.11	0.11	8.78
26. PRINTING & PUBLISHING	1.95	2.12	2.28	2.47	2.61	2.70	6.79
27. CHEMICALS & PRODUCTS	0.66	0.73	0.78	0.85	0.91	0.96	7.58
28. PLASTICS & SYNTHETIC MATLS.	0.11	0.12	0.13	0.14	0.16	0.16	8.87
29. DRUGS, CLEANING & TOILET PREP.	0.04	0.04	0.04	0.05	0.05	0.05	4.48
30. PAINTS & ALLIED PRODUCTS	0.06	0.06	0.07	0.08	0.08	0.08	8.19
31. PET REFINING & REL. PROD.	0.32	0.33	0.35	0.38	0.39	0.40	4.98
32. RUBBER & MISC. PLASTICS PROD.	0.26	0.30	0.33	0.37	0.41	0.44	10.68
35. GLASS & GLASS PRODUCTS	0.05	0.06	0.07	0.08	0.08	0.09	10.33
36. STONE & CLAY PRODUCTS	0.17	0.20	0.21	0.23	0.25	0.26	8.06
37. PRIMARY FERROUS METALS	0.49	0.54	0.59	0.64	0.68	0.71	7.66
38. NONFERROUS METALS	0.55	0.63	0.69	0.76	0.82	0.86	9.47
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.02	0.02	6.59
40. FAB. STRUCTURAL METAL PRODUCTS	0.65	0.74	0.79	0.85	0.90	0.95	7.73
41. SCREW MACHINE PROD. & STAMPINGS	0.31	0.35	0.38	0.41	0.44	0.45	7.71

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
42. SOCIAL SCIENT.&OTHER PROFESSIONALS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG, ANN % GROWTH 82 TO 87
42. OTHER FAB. METAL PRODUCTS	0.30	0.34	0.38	0.42	0.45	0.48	9.86
43. ENGINES & TURBINES	0.43	0.48	0.52	0.55	0.58	0.60	7.01
44. FARM & GARDEN MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	8.18
45. CONSTR. & MINING MACHINERY	0.09	0.10	0.11	0.12	0.12	0.13	7.50
46. MATERIALS HANDLING MACH. & EQ.	0.15	0.18	0.19	0.21	0.23	0.24	9.38
47. METALWORKING MACH. & EQ.	0.34	0.39	0.43	0.48	0.52	0.54	9.69
48. SPECIAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.05	0.05	0.06	12.37
49. GENERAL INDUSTRY MACHINERY	0.33	0.37	0.40	0.43	0.46	0.48	7.77
50. MISC. NONELECTRICAL MACH.	0.32	0.34	0.38	0.41	0.44	0.45	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.84	0.98	1.07	1.16	1.22	1.26	8.39
52. SERVICE INDUSTRY MACHINES	0.07	0.08	0.09	0.11	0.12	0.13	13.37
53. ELECTRICAL MACHINERY	0.36	0.42	0.45	0.50	0.54	0.56	9.12
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.17	0.20	0.21	0.23	0.25	0.26	8.25
56. RADIO, TV, & COMMUNICATION EQ.	14.64	16.88	18.58	20.19	21.30	21.82	8.30
57. ELECTRONIC COMPONENTS & ACCESS.	2.54	3.03	3.42	3.84	4.20	4.41	11.62
58. MISC. ELECTRICAL MACH. & EQ.	0.08	0.09	0.10	0.11	0.12	0.13	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.28	0.33	0.38	0.45	0.53	0.62	17.45
60. AIRCRAFT & PARTS	18.40	20.82	22.94	25.33	27.09	27.82	8.62
61. OTHER TRANSPORTATION EQ.	1.88	1.98	2.04	2.08	2.15	2.21	3.32
62. INSTRUMENTS & SUPPLIES	1.63	1.84	2.01	2.20	2.35	2.44	8.32
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.22	0.24	0.26	0.28	0.31	0.32	8.56
64. MISC. MANUFACTURING	0.08	0.09	0.10	0.10	0.11	0.11	5.87
65. TRANSPORTATION & WAREHOUSING	1.62	1.73	1.82	1.95	2.04	2.09	5.16
66. COMMUNICATION EXC. RADIO & TV	0.51	0.54	0.57	0.62	0.66	0.67	5.80
67. RADIO & TV BROADCASTING	1.54	1.73	1.88	2.04	2.17	2.26	7.97
68. UTILITIES	0.68	0.75	0.81	0.87	0.92	0.94	6.61
69. WHOLESALE & RETAIL TRADE	3.15	3.56	3.91	4.33	4.68	4.92	9.30
70. FINANCE & INSURANCE	3.09	3.51	3.88	4.32	4.69	4.92	9.75
71. REAL ESTATE & RENTAL	0.33	0.38	0.42	0.46	0.50	0.53	9.62
72. PERSONAL SERVICES EXC. AUTO.	1.60	1.80	1.95	2.13	2.27	2.38	8.21
73. BUSINESS SERVICES	8.61	9.74	10.77	11.96	12.91	13.50	9.42
74. EATING & DRINKING PLACES	0.53	0.61	0.67	0.75	0.81	0.84	9.62
75. AUTOMOBILE REPAIR & SERVICE	0.10	0.11	0.12	0.13	0.14	0.14	7.43
76. AMUSEMENTS	1.17	1.29	1.40	1.54	1.66	1.76	8.43
77. MISC. SERVICES	37.89	38.48	39.62	41.57	43.09	43.70	2.90
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	38.83	39.94	41.63	43.63	44.89	45.59	3.26
82. GOVERNMENT INDUSTRY	96.97	95.40	97.38	100.18	101.90	102.67	1.15
TOTAL, ALL INDUSTRIES	265.68	277.85	292.53	310.10	322.97	330.07	4.44

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## TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
42. SOCIAL SCIENT.&OTHER PROFESSIONALS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN. % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	5.70	5.98	6.14	6.32	6.59	6.89	3.87
2. OTHER AGRICULTURAL PRODUCTS	14.82	14.69	14.56	14.31	14.08	13.86	-1.34
3. FORESTRY & FISHERY PRODUCTS	3.39	3.55	3.76	3.90	3.89	3.83	2.50
4. AGR., FORESTRY, & FISHERY SERV.	4.82	4.94	4.98	5.09	5.14	5.21	1.60
5. IRON ORE MINING	0.51	0.55	0.59	0.59	0.58	0.57	2.14
6. NONFERROUS METAL MINING	1.33	1.40	1.45	1.49	1.47	1.48	2.12
7. COAL MINING	2.83	2.97	3.08	3.15	3.26	3.32	3.27
8. CRUDE PETROLEUM & N. GAS	15.07	15.21	15.33	15.19	15.13	15.39	0.43
9. STONE&CLAY MINING & QUARRYING	1.02	1.04	1.08	1.12	1.15	1.16	2.71
10. CHEM&FERTILIZER MIN. MINING	0.49	0.50	0.52	0.53	0.54	0.54	2.07
11. NEW CONSTRUCTION	92.61	94.83	97.01	100.36	103.05	104.75	2.49
13. ORDNANCE & ACCESSORIES	23.81	24.46	25.00	25.68	26.13	26.51	2.17
14. FOOD & KINDRED PRODUCTS	18.80	19.11	19.28	19.26	19.13	19.03	0.24
16. FABRIC, YARN & THREAD MILLS	3.35	3.44	3.52	3.58	3.61	3.60	1.46
17. MISC. TEXTILE GOODS	1.43	1.49	1.56	1.62	1.66	1.68	3.28
18. APPAREL	9.80	9.89	10.13	10.33	10.35	10.37	1.14
19. MISC. FABRICATED TEXTILE PROD.	1.85	1.90	1.95	1.99	2.01	2.03	1.88
20. LUMBER & WOOD PRODUCTS	6.20	6.76	7.06	7.37	7.48	7.46	3.75
21. WOOD CONTAINERS	0.33	0.33	0.33	0.34	0.35	0.35	1.17
22. HOUSEHOLD FURNITURE	3.76	3.98	4.12	4.27	4.37	4.42	3.29
23. OTHER FURNITURE & FIXTURES	2.69	2.71	2.79	2.87	2.92	2.98	2.05
24. PAPER & ALLIED PRODUCTS	9.31	9.60	9.71	9.75	9.75	9.74	0.92
25. PAPERBOARD CONTAINERS & BOXES	3.37	3.46	3.54	3.61	3.65	3.67	1.72
26. PRINTING & PUBLISHING	123.83	125.14	126.89	128.61	129.86	131.02	1.14
27. CHEMICALS & PRODUCTS	13.78	14.03	14.24	14.37	14.45	14.52	1.08
28. PLASTICS & SYNTHETIC MATLS.	4.40	4.57	4.74	4.87	4.94	4.97	2.47
29. DRUGS, CLEANING & TOILET PREP.	10.95	11.06	11.27	11.44	11.48	11.54	1.07
30. PAINTS & ALLIED PRODUCTS	1.09	1.14	1.18	1.22	1.24	1.26	2.97
31. PET REFINING & REL. PROD.	5.89	5.87	5.89	5.93	5.92	5.90	0.05
32. RUBBER & MISC. PLASTICS PROD.	9.65	10.01	10.47	10.84	11.16	11.30	3.22
35. GLASS & GLASS PRODUCTS	2.46	2.53	2.60	2.64	2.65	2.65	1.54
36. STONE & CLAY PRODUCTS	5.38	5.47	5.55	5.68	5.69	5.61	0.84
37. PRIMARY FERROUS METALS	6.86	7.06	7.27	7.35	7.36	7.32	1.30
38. NONFERROUS METALS	6.46	6.71	6.99	7.21	7.33	7.45	2.87
39. METAL CONTAINERS	1.14	1.12	1.12	1.14	1.15	1.16	0.34
40. FAB. STRUCTURAL METAL PRODUCTS	14.65	14.70	15.07	15.59	15.93	16.16	1.99

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
42. SOCIAL SCIENT.&OTHER PROFESSIONALS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROO.&STAMPINGS	5.10	5.36	5.54	5.63	5.66	5.68	2.18
42. OTHER FAB. METAL PRODUCTS	6.52	6.73	7.04	7.27	7.44	7.62	3.16
43. ENGINES & TURBINES	5.11	5.24	5.40	5.42	5.41	5.40	1.11
44. FARM & GARDEN MACHINERY	4.21	4.33	4.55	4.62	4.67	4.73	2.34
45. CONSTR. & MINING MACHINERY	7.58	8.03	8.47	8.80	9.05	9.17	3.89
46. MATERIALS HANDLING MACH. & EQ.	2.71	2.80	2.98	3.11	3.20	3.28	3.87
47. METALWORKING MACH. & EQ.	6.65	6.94	7.38	7.70	7.94	8.12	4.08
48. SPECIAL INDUSTRY MACHINERY	4.52	4.63	4.87	5.11	5.25	5.37	3.50
49. GENERAL INDUSTRY MACHINERY	7.52	7.73	8.11	8.35	8.51	8.66	2.87
50. MISC. NONELECTRICAL MACH.	2.75	2.82	2.94	3.01	3.04	3.07	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	22.41	23.57	24.82	25.53	26.12	26.94	3.75
52. SERVICE INDUSTRY MACHINES	3.98	4.13	4.33	4.40	4.41	4.41	2.10
53. ELECTRICAL MACHINERY	7.29	7.42	7.75	7.93	8.02	8.08	2.07
54. HOUSEHOLD APPLIANCES	2.45	2.52	2.59	2.68	2.73	2.77	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	3.66	3.69	3.79	3.88	3.94	3.98	1.70
56. RADIO, TV, & COMMUNICATION EQ.	34.67	35.55	36.74	37.45	37.85	38.55	2.14
57. ELECTRONIC COMPONENTS & ACCESS.	11.61	12.14	12.77	13.32	13.73	14.05	3.89
58. MISC. ELECTRICAL MACH. & EQ.	3.03	3.13	3.25	3.29	3.33	3.36	2.12
59. MOTOR VEHICLES & EQUIPMENT	14.25	14.94	15.49	15.78	16.00	16.13	2.50
60. AIRCRAFT & PARTS	36.85	38.33	39.39	40.64	40.75	40.74	2.03
61. OTHER TRANSPORTATION EQ.	6.49	6.68	6.91	7.06	7.07	7.13	1.91
62. INSTRUMENTS & SUPPLIES	14.03	14.29	14.87	15.46	15.88	16.15	2.85
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	4.97	5.04	5.26	5.49	5.67	5.82	3.19
64. MISC. MANUFACTURING	7.60	7.71	7.95	8.16	8.28	8.33	1.84
65. TRANSPORTATION & WAREHOUSING	38.21	39.37	40.48	41.77	42.33	42.64	2.21
66. COMMUNICATION EXC. RADIO & TV	20.44	20.72	21.34	21.69	22.32	22.64	2.07
67. RADIO & TV BROADCASTING	77.77	80.00	81.99	82.96	83.47	83.98	1.55
68. UTILITIES	31.80	32.03	32.23	32.42	32.64	32.81	0.63
69. WHOLESALE & RETAIL TRADE	515.37	530.31	545.23	557.62	567.02	576.85	2.28
70. FINANCE & INSURANCE	361.01	368.51	377.45	388.49	400.14	411.30	2.64
71. REAL ESTATE & RENTAL	12.10	12.52	12.99	13.43	13.81	14.14	3.17
72. PERSONAL SERVICES EXC. AUTO.	87.32	88.54	90.16	91.82	93.48	94.93	1.69
73. BUSINESS SERVICES	177.37	184.49	192.31	201.29	209.13	215.69	3.99
74. EATING & DRINKING PLACES	34.36	34.94	35.47	35.73	35.93	36.01	0.94
75. AUTOMOBILE REPAIR & SERVICE	6.78	6.92	7.00	7.04	7.09	7.16	1.11
76. AMUSEMENTS	119.98	121.65	125.04	127.99	131.17	134.07	2.25
77. MISC. SERVICES	5,869.48	5,876.89	5,901.00	5,967.38	6,054.20	6,157.84	0.96
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	997.38	1,004.04	1,014.52	1,030.06	1,046.73	1,064.77	1.32
82. GOVERNMENT INDUSTRY	991.78	991.07	1,001.61	1,019.32	1,037.11	1,054.84	1.24

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
42. SOCIAL SCIENT.&OTHER PROFESSIONALS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
TOTAL, ALL INDUSTRIES	10,004.77	10,071.57	10,176.62	10,332.50	10,499.78	10,680.68	1.32

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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
43. ECONOMISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.04	0.04	0.04	0.04	0.05	0.05	4.52
11. NEW CONSTRUCTION	0.01	0.01	0.01	0.01	0.01	0.01	8.59
56. RADIO, TV, & COMMUNICATION EQ.	0.02	0.02	0.03	0.03	0.03	0.03	8.44
60. AIRCRAFT & PARTS	0.31	0.36	0.41	0.47	0.52	0.55	12.26
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.04	0.04	0.04	0.04	6.69
68. UTILITIES	0.05	0.06	0.07	0.07	0.08	0.08	9.57
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.02	0.02	0.02	11.73
73. BUSINESS SERVICES	0.10	0.12	0.13	0.15	0.16	0.17	10.44
77. MISC. SERVICES	0.03	0.03	0.03	0.03	0.03	0.03	4.51
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.20	0.20	0.22	0.23	0.25	0.28	5.55
82. GOVERNMENT INDUSTRY	0.37	0.38	0.40	0.43	0.45	0.47	4.63
TOTAL, ALL INDUSTRIES	1.21	1.32	1.44	1.58	1.70	1.78	7.94
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.50	0.50	0.50	0.49	0.49	0.49	-0.27
11. NEW CONSTRUCTION	0.21	0.21	0.22	0.22	0.23	0.23	2.17
56. RADIO, TV, & COMMUNICATION EQ.	0.05	0.05	0.05	0.06	0.06	0.06	2.27
60. AIRCRAFT & PARTS	0.62	0.67	0.71	0.76	0.78	0.81	5.44
65. TRANSPORTATION & WAREHOUSING	0.72	0.76	0.79	0.83	0.85	0.87	3.71
68. UTILITIES	2.46	2.55	2.64	2.73	2.82	2.91	3.42
70. FINANCE & INSURANCE	1.33	1.38	1.45	1.51	1.59	1.66	4.49
73. BUSINESS SERVICES	2.11	2.21	2.33	2.46	2.58	2.68	4.96
77. MISC. SERVICES	3.93	4.00	4.08	4.19	4.31	4.45	2.55
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.12	2.19	2.27	2.37	2.47	2.56	3.92
82. GOVERNMENT INDUSTRY	15.43	15.98	16.68	17.51	18.36	19.19	4.46
TOTAL, ALL INDUSTRIES	31.28	32.36	33.64	35.11	36.52	37.91	3.92

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
44. SOCIAL SCIENTISTS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
38. NONFERROUS METALS	0.01	0.01	0.01	0.01	0.01	0.01	9.53
56. RADIO, TV, & COMMUNICATION EQ.	0.72	0.83	0.92	1.00	1.05	1.08	8.25
70. FINANCE & INSURANCE	0.11	0.12	0.14	0.16	0.17	0.18	11.04
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	8.56
73. BUSINESS SERVICES	0.61	0.67	0.73	0.80	0.84	0.87	7.35
77. MISC. SERVICES	0.47	0.48	0.50	0.54	0.56	0.58	4.35
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.90	1.91	1.98	2.07	2.13	2.17	2.74
82. GOVERNMENT INDUSTRY	5.51	5.46	5.62	5.83	5.98	6.08	1.98
TOTAL, ALL INDUSTRIES	9.34	9.51	9.92	10.42	10.78	11.00	3.31
TOTAL EMPLOYMENT							
38. NONFERROUS METALS	0.07	0.07	0.07	0.08	0.08	0.08	2.93
56. RADIO, TV, & COMMUNICATION EQ.	1.71	1.76	1.81	1.85	1.87	1.90	2.09
70. FINANCE & INSURANCE	12.54	12.97	13.45	14.01	14.59	15.15	3.85
71. REAL ESTATE & RENTAL	0.35	0.36	0.37	0.38	0.39	0.39	2.17
73. BUSINESS SERVICES	12.52	12.75	13.03	13.38	13.66	13.84	2.03
77. MISC. SERVICES	72.46	73.63	75.01	76.93	79.11	81.54	2.39
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	21.87	22.19	22.64	23.24	23.87	24.51	2.31
82. GOVERNMENT INDUSTRY	52.34	52.65	53.56	54.88	56.20	57.46	1.88
TOTAL, ALL INDUSTRIES	174.41	176.95	180.53	185.33	190.38	195.48	2.31

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
45. TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.23	0.26	0.28	0.30	0.32	0.33	8.10
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.73
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.05	0.05	0.06	0.06	0.06	7.32
56. RADIO, TV, & COMMUNICATION EQ.	0.38	0.44	0.48	0.53	0.55	0.57	8.28
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.06	0.06	11.35
60. AIRCRAFT & PARTS	0.21	0.23	0.26	0.28	0.30	0.31	8.59
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.06	0.06	0.06	3.38
62. INSTRUMENTS & SUPPLIES	0.01	0.01	0.01	0.01	0.01	0.01	8.43
65. TRANSPORTATION & WAREHOUSING	0.19	0.20	0.21	0.23	0.24	0.25	5.41
69. WHOLESALE & RETAIL TRADE	0.02	0.02	0.02	0.03	0.03	0.03	9.67
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.01	0.01	9.37
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	8.77
73. BUSINESS SERVICES	0.08	0.09	0.10	0.12	0.13	0.14	12.34
76. AMUSEMENTS	0.08	0.09	0.10	0.11	0.11	0.12	7.41
77. MISC. SERVICES	25.71	25.98	26.61	27.78	28.66	28.92	2.38
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.04	2.10	2.18	2.27	2.31	2.32	2.68
82. GOVERNMENT INDUSTRY	20.08	19.64	19.79	20.07	20.09	19.93	-0.15
TOTAL, ALL INDUSTRIES	49.22	49.29	50.29	51.99	53.04	53.23	1.58
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.37	0.38	0.39	0.40	0.41	0.41	1.98
43. ENGINES & TURBINES	0.10	0.10	0.11	0.11	0.11	0.11	1.79
51. OFFICE, COMPUTING & ACCT. MACH.	1.10	1.15	1.19	1.22	1.23	1.26	2.73
56. RADIO, TV, & COMMUNICATION EQ.	0.90	0.93	0.96	0.97	0.98	1.00	2.12
57. ELECTRONIC COMPONENTS & ACCESS.	0.17	0.17	0.18	0.19	0.20	0.20	3.63
60. AIRCRAFT & PARTS	0.41	0.43	0.44	0.46	0.46	0.46	1.99
61. OTHER TRANSPORTATION EQ.	0.17	0.18	0.18	0.19	0.19	0.19	1.97
62. INSTRUMENTS & SUPPLIES	0.08	0.08	0.08	0.09	0.09	0.09	2.96
65. TRANSPORTATION & WAREHOUSING	4.45	4.60	4.74	4.90	4.98	5.02	2.46
69. WHOLESALE & RETAIL TRADE	3.03	3.13	3.23	3.31	3.38	3.45	2.63
70. FINANCE & INSURANCE	0.95	0.96	0.98	1.01	1.03	1.06	2.29
72. PERSONAL SERVICES EXC. AUTO.	0.35	0.36	0.37	0.38	0.38	0.39	2.21
73. BUSINESS SERVICES	1.63	1.75	1.87	2.01	2.14	2.26	6.76
76. AMUSEMENTS	8.52	8.55	8.70	8.83	8.96	9.08	1.29
77. MISC. SERVICES	3,983.04	3,967.41	3,963.56	3,987.97	4,025.84	4,074.59	0.46
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	131.80	131.12	131.04	131.89	133.17	134.79	0.48



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
45. TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	56.78	58.77	57.44	58.64	59.82	60.69	1.34
TOTAL, ALL INDUSTRIES	4,195.92	4,180.37	4,177.83	4,204.96	4,245.80	4,297.50	0.48

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
46. COLLEGE&UNIVERSITY TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
77. MISC. SERVICES	3.05	3.03	3.06	3.15	3.20	3.18	0.83
TOTAL, ALL INDUSTRIES	3.05	3.03	3.06	3.15	3.20	3.18	0.83
TOTAL EMPLOYMENT							
77. MISC. SERVICES	472.28	463.43	456.05	451.92	449.26	447.69	-1.06
TOTAL, ALL INDUSTRIES	472.98	464.14	456.75	452.63	449.96	448.40	-1.06

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
47. ELEMENTARY SECOND SCHOOL TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
77. MISC. SERVICES	15.88	15.32	14.95	14.84	14.52	13.86	-2.89
TOTAL, ALL INDUSTRIES	15.88	15.32	14.95	14.84	14.52	13.86	-2.69
TOTAL EMPLOYMENT							
77. MISC. SERVICES	2,460.72	2,339.87	2,227.15	2,130.38	2,039.71	1,952.82	-4.52
TOTAL, ALL INDUSTRIES	2,462.65	2,341.70	2,228.89	2,132.04	2,041.30	1,954.35	-4.52

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
48. VOCATIONAL EDUCATION TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
65. TRANSPORTATION & WAREHOUSING	0.16	0.17	0.18	0.19	0.20	0.21	5.63
77. MISC. SERVICES	0.17	0.17	0.18	0.19	0.20	0.21	4.35
82. GOVERNMENT INDUSTRY	17.19	16.82	16.91	17.12	17.09	16.91	-0.33
TOTAL, ALL INDUSTRIES	17.52	17.16	17.27	17.51	17.50	17.33	-0.22
TOTAL EMPLOYMENT							
65. TRANSPORTATION & WAREHOUSING	3.76	3.89	4.02	4.17	4.24	4.29	2.68
77. MISC. SERVICES	25.87	26.29	26.78	27.46	28.24	29.11	2.39
82. GOVERNMENT INDUSTRY	8.77	8.56	8.59	8.69	8.66	8.55	-0.50
TOTAL, ALL INDUSTRIES	38.40	38.74	39.39	40.32	41.14	41.95	1.79

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
49. ALL OTHER TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
<b>DEFENSE INDUCED EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.23	0.26	0.28	0.30	0.32	0.33	8.10
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.73
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.05	0.05	0.06	0.06	0.06	7.32
56. RADIO, TV, & COMMUNICATION EQ.	0.38	0.44	0.48	0.53	0.55	0.57	8.28
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.06	0.06	11.35
60. AIRCRAFT & PARTS	0.21	0.23	0.26	0.28	0.30	0.31	8.59
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.06	0.06	0.06	3.38
62. INSTRUMENTS & SUPPLIES	0.01	0.01	0.01	0.01	0.01	0.01	8.43
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.03	0.04	0.04	4.15
69. WHOLESALE & RETAIL TRADE	0.02	0.02	0.02	0.03	0.03	0.03	9.67
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.01	0.01	9.37
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	8.77
73. BUSINESS SERVICES	0.08	0.09	0.10	0.12	0.13	0.14	12.34
76. AMUSEMENTS	0.08	0.09	0.10	0.11	0.11	0.12	7.41
77. MISC. SERVICES	5.16	5.26	5.44	5.72	5.95	6.06	3.25
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.23	2.32	2.42	2.54	2.61	2.65	3.48
82. GOVERNMENT INDUSTRY	2.88	2.82	2.88	2.95	3.00	3.02	0.91
TOTAL, ALL INDUSTRIES	11.51	11.81	12.27	12.89	13.34	13.57	3.33
<b>TOTAL EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.37	0.38	0.39	0.40	0.41	0.41	1.98
43. ENGINES & TURBINES	0.10	0.10	0.11	0.11	0.11	0.11	1.79
51. OFFICE, COMPUTING & ACCT. MACH.	1.10	1.15	1.19	1.22	1.23	1.26	2.73
56. RADIO, TV, & COMMUNICATION EQ.	0.90	0.93	0.96	0.97	0.98	1.00	2.12
57. ELECTRONIC COMPONENTS & ACCESS.	0.17	0.17	0.18	0.19	0.20	0.20	3.63
60. AIRCRAFT & PARTS	0.41	0.43	0.44	0.46	0.46	0.46	1.99
61. OTHER TRANSPORTATION EQ.	0.17	0.18	0.18	0.19	0.19	0.19	1.97
62. INSTRUMENTS & SUPPLIES	0.08	0.08	0.08	0.09	0.09	0.09	2.96
65. TRANSPORTATION & WAREHOUSING	0.69	0.70	0.71	0.73	0.73	0.73	1.24
69. WHOLESALE & RETAIL TRADE	3.03	3.13	3.23	3.31	3.38	3.45	2.63
70. FINANCE & INSURANCE	0.95	0.96	0.98	1.01	1.03	1.06	2.29
72. PERSONAL SERVICES EXC. AUTO.	0.35	0.36	0.37	0.38	0.38	0.39	2.21
73. BUSINESS SERVICES	1.63	1.75	1.87	2.01	2.14	2.26	6.76
76. AMUSEMENTS	8.52	8.55	8.70	8.83	8.96	9.08	1.29
77. MISC. SERVICES	799.96	803.77	809.89	821.79	836.52	853.63	1.31
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	132.72	133.35	134.43	136.42	138.85	141.64	1.31

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
49. ALL OTHER TEACHERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	28.17	28.00	28.14	28.50	28.85	29.19	0.71
TOTAL, ALL INDUSTRIES	981.58	986.30	994.24	1,009.00	1,026.95	1,047.60	1.31

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
 OCCUPATION BY INDUSTRY MODEL  
 ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
 50. WRITERS, ARTISTS & ENTERTAINERS  
 (THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GRDTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.03	0.03	0.03	0.03	0.04	0.04	8.86
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	-2.31
4. AGR., FORESTRY, & FISHERY SERV.	0.03	0.04	0.04	0.04	0.05	0.05	6.86
8. CRUDE PETROLEUM & N. GAS	0.04	0.04	0.04	0.05	0.05	0.05	4.58
11. NEW CONSTRUCTION	0.09	0.10	0.11	0.12	0.13	0.14	8.59
13. ORDNANCE & ACCESSORIES	2.00	2.26	2.47	2.68	2.83	2.94	8.10
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.04
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.14
18. APPAREL	0.02	0.02	0.02	0.02	0.02	0.02	5.81
19. MISC. FABRICATED TEXTILE PROD.	0.02	0.02	0.02	0.02	0.02	0.02	4.69
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.83
24. PAPER & ALLIED PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	7.05
25. PAPERBOARD CONTAINERS & BOXES	0.02	0.02	0.03	0.03	0.03	0.03	8.78
26. PRINTING & PUBLISHING	1.68	1.83	1.98	2.14	2.27	2.34	6.90
27. CHEMICALS & PRODUCTS	0.05	0.06	0.06	0.06	0.07	0.07	7.50
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.70
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.01	4.21
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.25
31. PET REFINING & REL. PROD.	0.03	0.03	0.03	0.03	0.04	0.04	5.27
32. RUBBER & MISC. PLASTICS PRDD.	0.02	0.03	0.03	0.04	0.04	0.04	10.29
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	12.09
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	8.49
37. PRIMARY FERROUS METALS	0.02	0.03	0.03	0.03	0.03	0.03	7.21
38. NONFERROUS METALS	0.02	0.02	0.03	0.03	0.03	0.03	9.64
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.05	0.06	0.06	0.06	0.07	7.74
41. SCREW MACHINE PRDD. & STAMPINGS	0.03	0.03	0.04	0.04	0.04	0.04	7.70
42. OTHER FAB. METAL PRODUCTS	0.03	0.03	0.04	0.04	0.05	0.05	10.07
43. ENGINES & TURBINES	0.09	0.11	0.12	0.12	0.13	0.14	7.71
45. CONSTR. & MINING MACHINERY	0.02	0.03	0.03	0.03	0.03	0.03	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.04	0.05	0.05	0.06	0.06	0.06	9.12
47. METALWORKING MACH. & EQ.	0.08	0.09	0.10	0.11	0.12	0.12	9.35
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.07
49. GENERAL INDUSTRY MACHINERY	0.06	0.07	0.08	0.08	0.09	0.09	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.18	0.21	0.23	0.24	0.25	0.26	7.32
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.02	0.02	0.02	0.02	13.34
53. ELECTRICAL MACHINERY	0.07	0.08	0.09	0.10	0.10	0.11	9.08

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
50. WRITERS, ARTISTS & ENTERTAINERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN
	82	83	84	85	86	87	% GROWTH 82 TO 87
55. ELECTRIC LIGHTING & WIRING EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.25
56. RADIO, TV, & COMMUNICATION EQ.	3.75	4.32	4.75	5.16	5.44	5.57	8.23
57. ELECTRONIC COMPONENTS & ACCESS.	0.49	0.59	0.66	0.74	0.81	0.85	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.03	0.03	0.03	0.03	0.03	9.56
59. MOTOR VEHICLES & EQUIPMENT	0.06	0.08	0.09	0.10	0.12	0.14	17.14
60. AIRCRAFT & PARTS	3.34	3.78	4.16	4.59	4.91	5.04	8.59
61. OTHER TRANSPORTATION EQ.	0.19	0.20	0.21	0.21	0.22	0.23	3.21
62. INSTRUMENTS & SUPPLIES	0.36	0.41	0.45	0.49	0.52	0.53	8.04
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.04	0.04	0.05	0.05	0.06	0.06	8.58
64. MISC. MANUFACTURING	0.03	0.03	0.04	0.04	0.04	0.04	5.31
65. TRANSPORTATION & WAREHOUSING	0.10	0.10	0.11	0.12	0.12	0.12	4.49
66. COMMUNICATION EXC. RADIO & TV	0.07	0.08	0.08	0.09	0.10	0.10	5.53
67. RADIO & TV BROADCASTING	1.41	1.58	1.71	1.86	1.98	2.06	7.94
68. UTILITIES	0.12	0.13	0.14	0.15	0.16	0.16	5.96
69. WHOLESALE & RETAIL TRADE	0.54	0.60	0.65	0.71	0.75	0.78	7.71
70. FINANCE & INSURANCE	0.11	0.12	0.14	0.15	0.16	0.17	9.97
71. REAL ESTATE & RENTAL	0.03	0.03	0.03	0.04	0.04	0.04	8.46
72. PERSONAL SERVICES EXC. AUTO.	0.48	0.53	0.57	0.61	0.64	0.66	6.38
73. BUSINESS SERVICES	2.76	3.07	3.33	3.64	3.87	3.99	7.68
74. EATING & DRINKING PLACES	0.39	0.45	0.50	0.55	0.59	0.62	9.57
76. AMUSEMENTS	0.99	1.09	1.18	1.30	1.40	1.48	8.50
77. MISC. SERVICES	0.71	0.73	0.75	0.79	0.83	0.84	3.37
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	11.47	12.09	12.74	13.46	13.90	14.13	4.26
82. GOVERNMENT INDUSTRY	8.76	8.60	8.77	9.03	9.19	9.26	1.11
TOTAL, ALL INDUSTRIES	41.16	44.17	47.11	50.39	52.73	54.04	5.60
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	4.28	4.55	4.73	4.93	5.21	5.53	5.24
2. OTHER AGRICULTURAL PRODUCTS	4.41	4.23	4.05	3.84	3.63	3.43	-4.91
4. AGR., FORESTRY, & FISHERY SERV.	1.88	1.93	1.95	2.00	2.02	2.06	1.76
8. CRUDE PETROLEUM & N. GAS	0.54	0.54	0.54	0.53	0.52	0.53	-0.23
11. NEW CONSTRUCTION	2.38	2.43	2.48	2.55	2.62	2.65	2.17
13. ORNANCE & ACCESSORIES	3.30	3.38	3.45	3.54	3.59	3.64	1.98
14. FOOD & KINDRED PRODUCTS	0.78	0.79	0.79	0.79	0.78	0.78	-0.07
16. FABRIC, YARN & THREAD MILLS	0.56	0.58	0.59	0.60	0.61	0.61	1.75
18. APPAREL	4.41	4.43	4.52	4.60	4.59	4.58	0.78
19. MISC. FABRICATED TEXTILE PROD.	0.66	0.68	0.70	0.71	0.72	0.72	1.86
20. LUMBER & WOOD PRODUCTS	0.30	0.32	0.34	0.35	0.35	0.35	3.02



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OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
50. WRITERS, ARTISTS & ENTERTAINERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87.
24. PAPER & ALLIED PRODUCTS	1.32	1.36	1.38	1.39	1.40	1.40	1.20
25. PAPERBOARD CONTAINERS & BOXES	0.96	0.98	1.01	1.03	1.04	1.04	1.72
26. PRINTING & PUBLISHING	106.92	108.16	109.80	111.39	112.59	113.70	1.24
27. CHEMICALS & PRODUCTS	1.05	1.07	1.08	1.09	1.10	1.10	0.99
28. PLASTICS & SYNTHETIC MATLS.	0.25	0.26	0.27	0.28	0.28	0.28	2.30
29. DRUGS, CLEANING & TOILET PREP.	1.94	1.95	1.98	2.01	2.01	2.02	0.80
30. PAINTS & ALLIED PRODUCTS	0.11	0.11	0.12	0.12	0.12	0.13	3.02
31. PET REFINING & REL. PROD.	0.52	0.52	0.53	0.53	0.53	0.53	0.33
32. RUBBER & MISC. PLASTICS PROD.	0.91	0.95	0.99	1.02	1.04	1.05	2.87
35. GLASS & GLASS PRODUCTS	0.39	0.41	0.43	0.44	0.45	0.46	3.16
36. STONE & CLAY PRODUCTS	0.34	0.35	0.36	0.37	0.37	0.36	1.24
37. PRIMARY FERROUS METALS	0.32	0.33	0.33	0.34	0.34	0.33	0.88
38. NONFERROUS METALS	0.25	0.26	0.27	0.28	0.29	0.29	3.03
40. FAB. STRUCTURAL METAL PRODUCTS	1.04	1.05	1.07	1.11	1.13	1.15	2.00
41. SCREW MACHINE PROD. & STAMPINGS	0.48	0.50	0.52	0.53	0.53	0.53	2.17
42. OTHER FAB. METAL PRODUCTS	0.66	0.68	0.72	0.74	0.76	0.78	3.34
43. ENGINES & TURBINES	1.12	1.16	1.20	1.21	1.22	1.22	1.77
45. CONSTR. & MINING MACHINERY	2.01	2.12	2.23	2.31	2.38	2.40	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.72	0.74	0.79	0.82	0.84	0.86	3.62
47. METALWORKING MACH. & EQ.	1.52	1.58	1.67	1.74	1.79	1.83	3.75
48. SPECIAL INDUSTRY MACHINERY	0.94	0.96	1.01	1.06	1.08	1.11	3.22
49. GENERAL INDUSTRY MACHINERY	1.45	1.48	1.55	1.59	1.62	1.65	2.62
50. MISC. NONELECTRICAL MACH.	0.19	0.19	0.20	0.20	0.21	0.21	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	4.84	5.03	5.24	5.34	5.41	5.53	2.72
52. SERVICE INDUSTRY MACHINES	0.70	0.73	0.76	0.77	0.77	0.77	2.08
53. ELECTRICAL MACHINERY	1.41	1.43	1.49	1.53	1.54	1.55	2.03
55. ELECTRIC LIGHTING & WIRING EQ.	0.98	0.99	1.01	1.04	1.05	1.07	1.70
56. RADIO, TV, & COMMUNICATION EQ.	8.88	9.10	9.40	9.57	9.67	9.84	2.07
57. ELECTRONIC COMPONENTS & ACCESS.	2.26	2.36	2.47	2.57	2.65	2.70	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.80	0.83	0.87	0.88	0.89	0.89	2.11
59. MOTOR VEHICLES & EQUIPMENT	3.30	3.45	3.57	3.63	3.67	3.69	2.23
60. AIRCRAFT & PARTS	6.69	6.96	7.15	7.37	7.39	7.38	2.00
61. OTHER TRANSPORTATION EQ.	0.66	0.68	0.71	0.72	0.72	0.73	1.80
62. INSTRUMENTS & SUPPLIES	3.12	3.17	3.29	3.41	3.49	3.54	2.58
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.92	0.93	0.97	1.02	1.05	1.08	3.21
64. MISC. MANUFACTURING	2.83	2.85	2.93	2.99	3.02	3.02	1.30
65. TRANSPORTATION & WAREHOUSING	2.32	2.37	2.42	2.49	2.50	2.51	1.57
66. COMMUNICATION EXC. RADIO & TV	3.00	3.04	3.12	3.16	3.25	3.29	1.82
67. RADIO & TV BROADCASTING	70.95	72.96	74.75	75.62	76.06	76.50	1.52

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
50. WRITERS, ARTISTS & ENTERTAINERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	5.51	5.51	5.51	5.51	5.52	5.51	0.02
69. WHOLESALE & RETAIL TRADE	88.04	89.22	90.37	91.08	91.28	91.56	0.79
70. FINANCE & INSURANCE	12.52	12.81	13.15	13.58	13.99	14.41	2.85
71. REAL ESTATE & RENTAL	1.01	1.03	1.05	1.08	1.10	1.11	2.08
72. PERSONAL SERVICES EXC. AUTO.	26.30	26.20	26.23	26.26	26.29	26.26	-0.03
73. BUSINESS SERVICES	56.83	58.07	59.52	61.31	62.74	63.78	2.34
74. EATING & DRINKING PLACES	25.36	25.76	26.14	26.32	26.46	26.51	0.89
76. AMUSEMENTS	101.02	102.49	105.42	107.98	110.72	113.24	2.31
77. MISC. SERVICES	110.47	111.13	112.12	113.91	116.09	118.60	1.43
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	240.24	243.71	248.18	252.31	255.80	259.06	1.52
82. GOVERNMENT INDUSTRY	37.63	37.53	37.87	38.51	39.15	39.72	1.09
TOTAL, ALL INDUSTRIES	970.71	984.73	1,002.80	1,019.47	1,033.59	1,046.76	1.52

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
51. PROFESSIONAL&TECH WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.62
2. OTHER AGRICULTURAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	2.77
3. FORESTRY & FISHERY PRODUCTS	0.08	0.09	0.10	0.10	0.11	0.11	5.44
4. AGR., FORESTRY, & FISHERY SERV.	0.05	0.06	0.06	0.07	0.07	0.07	6.58
5. IRON ORE MINING	0.03	0.03	0.03	0.03	0.04	0.04	8.27
6. NONFERROUS METAL MINING	0.07	0.08	0.09	0.10	0.11	0.12	10.67
7. COAL MINING	0.08	0.09	0.09	0.10	0.11	0.12	8.95
8. CRUDE PETROLEUM & N. GAS	1.03	1.11	1.16	1.24	1.31	1.34	5.31
9. STONE&CLAY MINING & QUARRYING	0.03	0.04	0.04	0.04	0.05	0.05	10.13
10. CHEM&FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.97
11. NEW CONSTRUCTION	3.38	3.84	4.13	4.58	4.94	5.19	8.95
13. DRONANCE & ACCESSORIES	12.17	13.83	15.14	16.44	17.42	18.16	8.33
14. FOOD & KINDRED PRODUCTS	0.12	0.13	0.14	0.15	0.15	0.16	5.39
16. FABRIC, YARN & THREAD MILLS	0.03	0.04	0.04	0.04	0.04	0.04	4.83
17. MISC. TEXTILE GOODS	0.02	0.02	0.02	0.02	0.03	0.03	7.74
18. APPAREL	0.02	0.02	0.02	0.02	0.02	0.03	6.51
19. MISC. FABRICATED TEXTILE PROD.	0.03	0.04	0.04	0.04	0.04	0.04	4.66
20. LUMBER & WOOD PRODUCTS	0.12	0.14	0.15	0.16	0.18	0.19	9.67
21. WOOD CONTAINERS	0.02	0.02	0.02	0.03	0.03	0.03	9.83
22. HOUSEHOLD FURNITURE	0.02	0.02	0.02	0.02	0.02	0.02	4.01
23. OTHER FURNITURE & FIXTURES	0.04	0.04	0.04	0.04	0.04	0.04	4.47
24. PAPER & ALLIED PRODUCTS	0.15	0.16	0.18	0.19	0.20	0.20	6.71
25. PAPERBOARD CONTAINERS & BOXES	0.05	0.06	0.06	0.07	0.08	0.08	8.79
26. PRINTING & PUBLISHING	0.26	0.28	0.30	0.33	0.34	0.35	6.10
27. CHEMICALS & PRODUCTS	0.61	0.67	0.72	0.78	0.84	0.88	7.58
28. PLASTICS & SYNTHETIC MATLS.	0.10	0.11	0.12	0.13	0.14	0.15	8.89
29. DRUGS, CLEANING & TOILET PREP.	0.03	0.03	0.03	0.04	0.04	0.04	4.54
30. PAINTS & ALLIED PRODUCTS	0.05	0.06	0.06	0.07	0.07	0.08	8.19
31. PET REFINING & REL. PROD.	0.29	0.30	0.32	0.34	0.36	0.36	4.95
32. RUBBER & MISC. PLASTICS PROD.	0.24	0.27	0.30	0.34	0.37	0.39	10.72
35. GLASS & GLASS PRODUCTS	0.04	0.05	0.06	0.06	0.07	0.07	10.00
36. STONE & CLAY PRODUCTS	0.16	0.18	0.19	0.21	0.23	0.24	8.02
37. PRIMARY FERROUS METALS	0.46	0.51	0.56	0.60	0.64	0.67	7.69
38. NONFERROUS METALS	0.52	0.59	0.65	0.72	0.78	0.82	9.46
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.60	0.68	0.73	0.78	0.83	0.88	7.73
41. SCREW MACHINE PROD.&STAMPINGS	0.28	0.32	0.34	0.37	0.39	0.41	7.71

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
51. PROFESSIONAL & TECH WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
42. OTHER FAB. METAL PRODUCTS	0.27	0.31	0.34	0.37	0.41	0.43	9.84
43. ENGINES & TURBINES	0.32	0.36	0.39	0.41	0.43	0.45	6.78
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	8.20
45. CONSTR. & MINING MACHINERY	0.07	0.07	0.08	0.09	0.09	0.09	7.60
46. MATERIALS HANDLING MACH. & EQ.	0.11	0.13	0.14	0.16	0.17	0.18	9.48
47. METALWORKING MACH. & EQ.	0.26	0.30	0.33	0.37	0.40	0.42	9.79
48. SPECIAL INDUSTRY MACHINERY	0.03	0.03	0.03	0.04	0.04	0.05	12.45
49. GENERAL INDUSTRY MACHINERY	0.26	0.30	0.32	0.35	0.37	0.39	7.83
50. MISC. NONELECTRICAL MACH.	0.29	0.32	0.35	0.39	0.41	0.42	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.62	0.72	0.79	0.86	0.91	0.94	8.78
52. SERVICE INDUSTRY MACHINES	0.06	0.07	0.08	0.09	0.10	0.11	13.37
53. ELECTRICAL MACHINERY	0.28	0.33	0.36	0.39	0.42	0.44	9.13
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.13	0.14	0.15	0.17	0.18	0.19	8.25
56. RADIO, TV, & COMMUNICATION EQ.	9.77	11.26	12.40	13.48	14.22	14.57	8.33
57. ELECTRONIC COMPONENTS & ACCESS.	2.01	2.40	2.71	3.04	3.33	3.50	11.69
58. MISC. ELECTRICAL MACH. & EQ.	0.06	0.07	0.07	0.08	0.09	0.09	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.21	0.25	0.29	0.34	0.40	0.47	17.55
60. AIRCRAFT & PARTS	14.54	16.44	18.11	19.98	21.36	21.92	8.55
61. OTHER TRANSPORTATION EQ.	1.63	1.72	1.78	1.81	1.87	1.92	3.33
62. INSTRUMENTS & SUPPLIES	1.26	1.42	1.55	1.70	1.82	1.88	6.40
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.17	0.19	0.21	0.23	0.25	0.26	8.55
64. MISC. MANUFACTURING	0.05	0.06	0.08	0.06	0.07	0.07	6.19
65. TRANSPORTATION & WAREHOUSING	1.31	1.39	1.46	1.56	1.63	1.68	5.13
66. COMMUNICATION EXC. RADIO & TV	0.42	0.45	0.46	0.52	0.55	0.56	5.85
67. RADIO & TV BROADCASTING	0.13	0.15	0.16	0.18	0.19	0.20	8.28
68. UTILITIES	0.51	0.56	0.60	0.65	0.68	0.70	6.44
69. WHOLESALE & RETAIL TRADE	2.59	2.94	3.24	3.59	3.89	4.10	9.62
70. FINANCE & INSURANCE	2.86	3.24	3.58	3.98	4.32	4.54	9.69
71. REAL ESTATE & RENTAL	0.29	0.33	0.37	0.41	0.45	0.47	9.76
72. PERSONAL SERVICES EXC. AUTO.	1.11	1.26	1.37	1.51	1.62	1.71	6.96
73. BUSINESS SERVICES	5.06	5.79	6.47	7.26	7.90	8.33	10.49
74. EATING & DRINKING PLACES	0.14	0.16	0.16	0.20	0.21	0.22	9.76
75. AUTOMOBILE REPAIR & SERVICE	0.09	0.10	0.11	0.12	0.13	0.13	7.37
76. AMUSEMENTS	0.10	0.11	0.12	0.13	0.15	0.15	8.56
77. MISC. SERVICES	10.97	11.27	11.73	12.43	13.02	13.33	3.98
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	34.55	35.39	36.86	38.61	39.75	40.39	3.17
82. GOVERNMENT INDUSTRY	62.24	61.32	62.79	64.82	66.19	66.93	1.46
TOTAL, ALL INDUSTRIES	176.06	185.31	196.12	208.73	218.17	223.72	4.91

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TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
51. PROFESSIONAL & TECH WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	1.42	1.43	1.41	1.39	1.38	1.37	-0.78
2. OTHER AGRICULTURAL PRODUCTS	10.41	10.46	10.50	10.47	10.45	10.43	0.03
3. FORESTRY & FISHERY PRODUCTS	3.35	3.51	3.72	3.86	3.85	3.79	2.49
4. AGR., FORESTRY, & FISHERY SERV.	2.91	2.98	3.00	3.06	3.09	3.13	1.50
5. IRON ORE MINING	0.49	0.53	0.57	0.56	0.55	0.54	2.08
6. NONFERROUS METAL MINING	1.22	1.29	1.34	1.37	1.35	1.36	2.11
7. COAL MINING	2.72	2.86	2.96	3.03	3.13	3.20	3.26
8. CRUDE PETROLEUM & N. GAS	14.01	14.15	14.27	14.15	14.09	14.35	0.48
9. STONE & CLAY MINING & QUARRYING	1.00	1.02	1.06	1.10	1.13	1.14	2.72
10. CHEM & FERTILIZER MIN. MINING	0.46	0.47	0.49	0.50	0.50	0.51	2.08
11. NEW CONSTRUCTION	90.01	92.17	94.31	97.57	100.20	101.85	2.50
13. ORDNANCE & ACCESSORIES	20.13	20.69	21.15	21.74	22.12	22.45	2.20
14. FOOD & KINDRED PRODUCTS	17.99	18.29	18.45	18.44	18.31	18.22	0.26
16. FABRIC, YARN & THREAD MILLS	2.66	2.74	2.80	2.85	2.87	2.86	1.45
17. MISC. TEXTILE GOODS	1.25	1.31	1.37	1.42	1.46	1.48	3.32
18. APPAREL	5.16	5.22	5.36	5.49	5.52	5.54	1.45
19. MISC. FABRICATED TEXTILE PROD.	1.18	1.21	1.25	1.27	1.29	1.30	1.86
20. LUMBER & WOOD PRODUCTS	5.74	6.26	6.54	6.83	6.95	6.93	3.82
21. WOOD CONTAINERS	0.32	0.32	0.33	0.34	0.34	0.34	1.17
22. HOUSEHOLD FURNITURE	3.10	3.28	3.40	3.52	3.61	3.65	3.34
23. OTHER FURNITURE & FIXTURES	2.23	2.25	2.31	2.38	2.43	2.47	2.05
24. PAPER & ALLIED PRODUCTS	7.95	8.19	8.28	8.31	8.31	8.30	0.87
25. PAPERBOARD CONTAINERS & BOXES	2.40	2.47	2.53	2.57	2.60	2.62	1.72
26. PRINTING & PUBLISHING	16.68	16.74	16.86	16.98	17.03	17.08	0.48
27. CHEMICALS & PRODUCTS	12.63	12.86	13.05	13.18	13.25	13.31	1.07
28. PLASTICS & SYNTHETIC MATLS.	4.04	4.20	4.36	4.48	4.55	4.57	2.48
29. DRUGS, CLEANING & TOILET PREP.	8.92	9.02	9.19	9.34	9.38	9.44	1.12
30. PAINTS & ALLIED PRODUCTS	0.98	1.02	1.06	1.09	1.12	1.13	2.96
31. PET REFINING & REL. PROD.	5.32	5.30	5.31	5.35	5.34	5.32	0.02
32. RUBBER & MISC. PLASTICS PROD.	8.67	9.00	9.41	9.76	10.04	10.18	3.26
35. GLASS & GLASS PRODUCTS	2.01	2.06	2.11	2.14	2.15	2.14	1.24
36. STONE & CLAY PRODUCTS	4.96	5.04	5.11	5.23	5.24	5.16	0.81
37. PRIMARY FERROUS METALS	6.49	6.65	6.88	6.96	6.97	6.94	1.33
38. NONFERROUS METALS	6.13	6.36	6.63	6.83	6.95	7.05	2.86
39. METAL CONTAINERS	1.10	1.09	1.09	1.11	1.12	1.12	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	13.53	13.57	13.92	14.40	14.72	14.93	1.99

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
51. PROFESSIONAL & TECH WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROD. & STAMPINGS	4.81	4.85	5.00	5.09	5.12	5.14	2.18
42. OTHER FAB. METAL PRODUCTS	5.84	6.03	6.30	6.50	6.66	6.81	3.13
43. ENGINES & TURBINES	3.89	3.98	4.09	4.10	4.08	4.07	0.90
44. FARM & GARDEN MACHINERY	3.31	3.40	3.57	3.63	3.67	3.71	2.36
45. CONSTR. & MINING MACHINERY	5.53	5.87	6.20	6.44	6.63	6.72	3.98
46. MATERIALS HANDLING MACH. & EQ.	1.98	2.05	2.18	2.28	2.34	2.40	3.96
47. METALWORKING MACH. & EQ.	5.11	5.34	5.68	5.93	6.13	6.26	4.17
48. SPECIAL INDUSTRY MACHINERY	3.56	3.65	3.84	4.03	4.14	4.24	3.58
49. GENERAL INDUSTRY MACHINERY	6.04	6.21	6.52	6.71	6.85	6.98	2.92
50. MISC. NONELECTRICAL MACH.	2.58	2.63	2.74	2.80	2.83	2.86	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	16.39	17.31	18.31	18.89	19.39	20.06	4.12
52. SERVICE INDUSTRY MACHINES	3.26	3.39	3.55	3.60	3.61	3.62	2.11
53. ELECTRICAL MACHINERY	5.71	5.81	6.07	6.21	6.28	6.33	2.08
54. HOUSEHOLD APPLIANCES	2.03	2.09	2.15	2.22	2.27	2.30	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	2.65	2.67	2.74	2.81	2.85	2.88	1.70
56. RADIO, TV, & COMMUNICATION EQ.	23.12	23.72	24.52	24.99	25.27	25.75	2.17
57. ELECTRONIC COMPONENTS & ACCESS.	9.18	9.61	10.12	10.56	10.89	11.15	3.95
58. MISC. ELECTRICAL MACH. & EQ.	2.20	2.27	2.38	2.39	2.42	2.44	2.12
59. MOTOR VEHICLES & EQUIPMENT	10.84	11.37	11.80	12.03	12.21	12.31	2.59
60. AIRCRAFT & PARTS	29.13	30.28	31.09	32.06	32.13	32.09	1.96
61. OTHER TRANSPORTATION EQ.	5.64	5.80	6.00	6.13	6.15	6.20	1.92
62. INSTRUMENTS & SUPPLIES	10.81	11.01	11.47	11.93	12.27	12.49	2.93
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	3.97	4.03	4.20	4.39	4.53	4.65	3.19
64. MISC. MANUFACTURING	4.71	4.79	4.95	5.10	5.19	5.23	2.15
65. TRANSPORTATION & WAREHOUSING	30.70	31.63	32.51	33.54	33.98	34.22	2.19
66. COMMUNICATION EXC. RADIO & TV	17.06	17.31	17.84	18.14	18.67	18.95	2.12
67. RADIO & TV BROADCASTING	6.63	6.85	7.04	7.14	7.20	7.27	1.84
68. UTILITIES	23.68	23.82	23.93	24.03	24.16	24.25	0.47
69. WHOLESALE & RETAIL TRADE	423.87	437.51	451.17	462.76	471.86	481.34	2.58
70. FINANCE & INSURANCE	333.67	340.38	348.42	358.40	368.94	379.03	2.58
71. REAL ESTATE & RENTAL	10.72	11.11	11.55	11.96	12.31	12.62	3.31
72. PERSONAL SERVICES EXC. AUTO.	60.60	61.91	63.51	65.12	66.74	68.21	2.39
73. BUSINESS SERVICES	104.29	109.71	115.55	122.12	128.01	133.12	5.00
74. EATING & DRINKING PLACES	8.97	9.13	9.28	9.36	9.42	9.45	1.06
75. AUTOMOBILE REPAIR & SERVICE	6.44	6.57	6.64	6.68	6.72	6.79	1.05
76. AMUSEMENTS	10.44	10.60	10.91	11.18	11.47	11.74	2.37
77. MISC. SERVICES	1,699.59	1,720.51	1,746.23	1,784.39	1,828.84	1,878.67	2.02
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	585.94	594.86	608.34	620.27	634.02	648.12	2.04
82. GOVERNMENT INDUSTRY	829.40	827.84	835.63	849.23	862.91	877.00	1.12

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
51. PROFESSIONAL&TECH WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
TOTAL, ALL INDUSTRIES	4,616.63	4,686.86	4,777.35	4,887.13	4,995.44	5,106.53	2.04

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
52. BUSINESS PROFESSIONALS & STAFF  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.07	0.08	0.08	0.08	0.08	0.08	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.13	0.13	0.14	0.14	0.15	0.15	3.15
3. FORESTRY & FISHERY PRODUCTS	0.11	0.11	0.12	0.13	0.14	0.14	5.92
4. AGR., FORESTRY, & FISHERY SERV.	0.45	0.49	0.53	0.57	0.61	0.64	7.14
5. IRON ORE MINING	0.12	0.14	0.15	0.16	0.17	0.18	8.08
6. NONFERROUS METAL MINING	0.36	0.42	0.47	0.52	0.56	0.60	10.51
7. COAL MINING	0.62	0.70	0.77	0.84	0.92	0.96	9.24
8. CRUDE PETROLEUM & N. GAS	5.31	5.64	5.83	6.14	6.43	6.48	4.04
9. STONE & CLAY MINING & QUARRYING	0.55	0.62	0.67	0.76	0.83	0.88	9.94
10. CHEM & FERTILIZER MIN. MINING	0.06	0.07	0.07	0.08	0.08	0.09	7.91
11. NEW CONSTRUCTION	25.05	28.48	30.78	34.16	36.93	38.91	9.21
13. ORNANCE & ACCESSORIES	29.36	33.29	36.37	39.40	41.66	43.33	8.09
14. FOOD & KINDRED PRODUCTS	2.21	2.39	2.52	2.66	2.77	2.83	5.10
15. TOBACCO MANUFACTURES	0.01	0.02	0.02	0.02	0.02	0.02	6.76
16. FABRIC, YARN & THREAD MILLS	0.53	0.57	0.60	0.63	0.66	0.68	5.13
17. MISC. TEXTILE GOODS	0.29	0.31	0.34	0.37	0.39	0.41	7.12
18. APPAREL	0.58	0.62	0.65	0.70	0.74	0.79	6.40
19. MISC. FABRICATED TEXTILE PROO.	1.02	1.08	1.13	1.20	1.25	1.29	4.77
20. LUMBER & WOOD PRODUCTS	1.32	1.51	1.64	1.79	1.96	2.09	9.54
21. WOOD CONTAINERS	0.29	0.33	0.36	0.40	0.43	0.46	9.81
22. HOUSEHOLD FURNITURE	0.25	0.27	0.29	0.30	0.30	0.30	3.79
23. OTHER FURNITURE & FIXTURES	0.48	0.50	0.52	0.55	0.57	0.60	4.63
24. PAPER & ALLIED PRODUCTS	1.38	1.52	1.65	1.77	1.86	1.92	6.81
25. PAPERBOARD CONTAINERS & BOXES	0.78	0.87	0.96	1.06	1.14	1.20	9.09
26. PRINTING & PUBLISHING	7.40	8.05	8.64	9.34	9.84	10.15	6.55
27. CHEMICALS & PRODUCTS	5.37	5.92	6.34	6.87	7.38	7.72	7.51
28. PLASTICS & SYNTHETIC MATLS.	0.70	0.78	0.86	0.95	1.02	1.07	8.90
29. DRUGS, CLEANING & TOILET PREP.	0.50	0.52	0.55	0.58	0.60	0.61	4.28
30. PAINTS & ALLIED PRODUCTS	1.03	1.14	1.23	1.35	1.46	1.53	8.30
31. PET REFINING & REL. PROO.	1.81	1.91	2.02	2.15	2.26	2.33	5.18
32. RUBBER & MISC. PLASTICS PROO.	2.91	3.31	3.70	4.17	4.59	4.87	10.82
33. LEATHER TANNING & FINISHING	0.01	0.01	0.01	0.01	0.01	0.01	5.37
34. FOOTWEAR & OTHER LEATHER PROO.	0.06	0.07	0.07	0.08	0.08	0.08	6.00
35. GLASS & GLASS PRODUCTS	0.50	0.57	0.64	0.72	0.78	0.84	10.80
36. STONE & CLAY PRODUCTS	2.52	2.88	3.09	3.42	3.67	3.86	8.93
37. PRIMARY FERROUS METALS	4.74	5.27	5.69	6.20	6.60	6.88	7.74
38. NONFERROUS METALS	4.73	5.43	5.97	6.58	7.09	7.42	9.40



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
52. BUSINESS PROFESSIONALS&STAFF  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
39. METAL CONTAINERS	0.12	0.13	0.14	0.15	0.16	0.17	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	5.16	5.82	6.23	6.72	7.14	7.55	7.90
41. SCREW MACHINE PROD.&STAMPINGS	2.67	2.99	3.22	3.51	3.73	3.89	7.82
42. OTHER FAB. METAL PRODUCTS	3.27	3.75	4.12	4.57	4.95	5.24	9.84
43. ENGINES & TURBINES	1.46	1.65	1.81	1.93	2.04	2.13	7.86
44. FARM & GARDEN MACHINERY	0.07	0.08	0.09	0.09	0.10	0.11	8.34
45. CONSTR. & MINING MACHINERY	0.61	0.68	0.73	0.78	0.82	0.85	6.78
46. MATERIALS HANDLING MACH. & EQ.	1.04	1.19	1.29	1.42	1.52	1.58	8.64
47. METALWORKING MACH. & EQ.	3.45	3.95	4.34	4.80	5.16	5.38	9.33
48. SPECIAL INDUSTRY MACHINERY	0.30	0.35	0.39	0.44	0.50	0.53	12.20
49. GENERAL INDUSTRY MACHINERY	2.75	3.08	3.32	3.57	3.79	3.95	7.52
50. MISC. NONELECTRICAL MACH.	4.70	5.12	5.61	6.16	6.54	6.74	7.47
51. OFFICE, COMPUTING & ACCT. MACH.	3.94	4.52	4.92	5.29	5.52	5.68	7.62
52. SERVICE INDUSTRY MACHINES	0.60	0.70	0.77	0.89	1.01	1.13	13.51
53. ELECTRICAL MACHINERY	2.68	3.07	3.36	3.70	3.99	4.18	9.31
54. HOUSEHOLD APPLIANCES	0.05	0.06	0.06	0.07	0.08	0.08	9.75
55. ELECTRIC LIGHTING & WIRING EQ.	1.75	1.98	2.13	2.35	2.53	2.64	8.57
56. RADIO, TV, & COMMUNICATION EQ.	55.24	63.46	69.66	75.47	79.37	81.08	7.98
57. ELECTRONIC COMPONENTS & ACCESS.	16.03	19.10	21.53	24.11	26.33	27.62	11.49
58. MISC. ELECTRICAL MACH. & EQ.	0.89	0.80	0.87	0.96	1.04	1.10	9.72
59. MOTOR VEHICLES & EQUIPMENT	1.66	1.99	2.26	2.68	3.15	3.68	17.22
60. AIRCRAFT & PARTS	58.64	66.26	72.93	80.39	85.88	88.07	8.48
61. OTHER TRANSPORTATION EQ.	8.44	8.90	9.19	9.39	9.69	9.99	3.45
62. INSTRUMENTS & SUPPLIES	13.72	15.47	16.89	18.50	19.71	20.41	6.28
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.09	2.30	2.50	2.76	2.98	3.15	8.54
64. MISC. MANUFACTURING	0.94	1.03	1.09	1.16	1.22	1.25	5.86
65. TRANSPORTATION & WAREHOUSING	64.39	68.34	71.65	76.30	79.60	81.36	4.79
66. COMMUNICATION EXC. RADIO & TV	17.24	18.26	19.36	20.85	21.98	22.42	5.39
67. RADIO & TV BROADCASTING	1.81	2.04	2.23	2.43	2.59	2.72	8.46
68. UTILITIES	5.94	6.51	7.00	7.52	7.90	8.04	6.23
69. WHOLESALE & RETAIL TRADE	70.19	79.37	87.45	96.92	104.93	110.47	9.50
70. FINANCE & INSURANCE	30.35	34.30	37.87	42.03	45.52	47.73	9.48
71. REAL ESTATE & RENTAL	7.43	8.28	9.08	9.96	10.69	11.14	8.44
72. PERSONAL SERVICES EXC. AUTO.	15.98	17.94	19.46	21.26	22.68	23.78	8.28
73. BUSINESS SERVICES	49.22	55.56	61.27	67.90	73.13	76.35	9.18
74. EATING & DRINKING PLACES	11.50	13.28	14.88	16.63	18.07	18.97	10.53
75. AUTOMOBILE REPAIR & SERVICE	2.70	2.98	3.21	3.47	3.69	3.81	7.16
76. AMUSEMENTS	2.31	2.54	2.75	3.02	3.24	3.42	8.20
77. MISC. SERVICES	33.91	34.80	36.19	38.34	40.13	41.07	3.90

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
82. BUSINESS PROFESSIONALS & STAFF  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	124.06	129.82	136.72	144.71	150.19	153.24	4.32
82. GOVERNMENT INDUSTRY	267.60	263.09	268.89	277.05	282.37	285.03	1.27
TOTAL, ALL INDUSTRIES	1,000.33	1,071.52	1,142.90	1,227.10	1,291.72	1,330.14	5.88
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	12.05	12.15	11.96	11.75	11.67	11.57	-0.61
2. OTHER AGRICULTURAL PRODUCTS	87.92	88.59	89.34	89.35	89.49	89.69	0.40
3. FORESTRY & FISHERY PRODUCTS	4.21	4.44	4.73	4.93	4.94	4.87	2.98
4. AGR., FORESTRY, & FISHERY SERV.	24.63	25.39	25.73	26.36	26.74	27.23	2.03
5. IRON ORE MINING	2.34	2.52	2.70	2.67	2.62	2.57	1.90
6. NONFERROUS METAL MINING	6.22	6.53	6.76	6.91	6.84	6.85	1.97
7. COAL MINING	22.14	23.32	24.23	24.87	25.74	26.33	3.53
8. CRUDE PETROLEUM & N. GAS	71.99	71.80	71.52	70.05	68.94	69.37	-0.74
9. STONE & CLAY MINING & QUARRYING	17.46	17.82	18.42	19.20	19.62	19.79	2.54
10. CHEM & FERTILIZER MIN. MINING	2.95	3.02	3.12	3.20	3.23	3.25	2.01
11. NEW CONSTRUCTION	666.71	684.55	702.17	728.19	749.47	763.46	2.75
13. ORDNANCE & ACCESSORIES	48.58	49.80	50.79	52.09	52.89	53.57	1.98
14. FOOD & KINDRED PRODUCTS	330.26	334.84	336.93	335.81	332.60	329.98	-0.02
15. TOBACCO MANUFACTURES	11.15	11.11	10.93	10.72	10.56	10.33	-1.51
16. FABRIC, YARN & THREAD MILLS	42.62	43.89	45.07	45.96	46.38	46.45	1.74
17. MISC. TEXTILE GOODS	19.79	20.54	21.39	22.09	22.46	22.63	2.72
18. APPAREL	160.51	162.39	166.61	170.30	171.04	171.65	1.35
19. MISC. FABRICATED TEXTILE PROD.	34.66	35.57	36.56	37.29	37.76	38.16	1.94
20. LUMBER & WOOD PRODUCTS	64.06	69.76	72.83	75.96	77.13	76.82	3.70
21. WOOD CONTAINERS	4.79	4.79	4.88	5.00	5.05	5.08	1.18
22. HOUSEHOLD FURNITURE	42.89	45.27	46.80	48.41	49.50	50.00	3.12
23. OTHER FURNITURE & FIXTURES	30.21	30.43	31.39	32.33	33.01	33.70	2.21
24. PAPER & ALLIED PRODUCTS	74.31	76.63	77.57	77.95	77.99	78.00	0.97
25. PAPERBOARD CONTAINERS & BOXES	35.30	36.36	37.30	38.12	38.64	38.98	2.01
26. PRINTING & PUBLISHING	470.80	474.60	480.10	485.49	489.16	492.49	0.90
27. CHEMICALS & PRODUCTS	111.61	113.58	115.20	116.22	116.78	117.29	1.00
28. PLASTICS & SYNTHETIC MATLS.	28.84	29.95	31.11	31.95	32.43	32.61	2.49
29. DRUGS, CLEANING & TOILET PREP.	140.77	141.90	144.26	146.19	146.41	147.00	0.87
30. PAINTS & ALLIED PRODUCTS	19.50	20.44	21.18	21.92	22.39	22.68	3.07
31. PET REFINING & REL. PROD.	33.56	33.51	33.69	33.98	34.03	33.98	0.25
32. RUBBER & MISC. PLASTICS PROD.	107.06	111.27	116.53	120.87	124.49	126.27	3.38
33. LEATHER TANNING & FINISHING	2.08	2.15	2.23	2.23	2.23	2.22	1.28
34. FOOTWEAR & OTHER LEATHER PROD.	24.05	24.28	24.56	24.66	24.63	24.62	0.47

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
52. BUSINESS PROFESSIONALS & STAFF  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
35. GLASS & GLASS PRODUCTS	22.85	23.60	24.36	24.90	25.11	25.20	1.98
36. STONE & CLAY PRODUCTS	77.91	79.96	81.79	84.28	85.15	84.57	1.66
37. PRIMARY FERROUS METALS	66.50	68.47	70.56	71.37	71.58	71.21	1.38
38. NONFERROUS METALS	55.94	58.05	60.45	62.26	63.31	64.24	2.81
39. METAL CONTAINERS	8.17	8.06	8.08	8.22	8.28	8.32	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	115.60	116.19	119.35	123.66	126.60	128.59	2.15
41. SCREW MACHINE PROD. & STAMPINGS	43.52	45.79	47.33	48.19	48.49	48.73	2.29
42. OTHER FAB. METAL PRODUCTS	71.19	73.49	76.80	79.29	81.15	83.08	3.14
43. ENGINES & TURBINES	17.51	18.10	18.80	19.02	19.15	19.25	1.91
44. FARM & GARDEN MACHINERY	21.57	22.19	23.39	23.76	24.07	24.39	2.49
45. CONSTR. & MINING MACHINERY	51.44	54.12	56.69	58.45	59.76	60.19	3.19
46. MATERIALS HANDLING MACH. & EQ.	18.39	18.89	19.94	20.67	21.14	21.50	3.17
47. METALWORKING MACH. & EQ.	66.93	69.63	73.75	76.72	78.92	80.39	3.74
48. SPECIAL INDUSTRY MACHINERY	41.39	42.32	44.49	46.54	47.74	48.80	3.35
49. GENERAL INDUSTRY MACHINERY	62.68	64.24	67.26	69.05	70.22	71.35	2.62
50. MISC. NONELECTRICAL MACH.	41.08	42.12	43.87	44.83	45.21	45.71	2.16
51. OFFICE, COMPUTING & ACCT. MACH.	104.44	108.93	113.85	116.25	118.18	121.15	3.01
52. SERVICE INDUSTRY MACHINES	33.09	34.44	36.13	36.76	36.89	36.95	2.23
53. ELECTRICAL MACHINERY	53.79	54.84	57.42	58.85	59.59	60.11	2.24
54. HOUSEHOLD APPLIANCES	20.22	20.82	21.44	22.22	22.75	23.11	2.71
55. ELECTRIC LIGHTING & WIRING EQ.	36.68	37.06	38.18	39.22	39.91	40.51	2.00
56. RADIO, TV, & COMMUNICATION EQ.	130.80	133.70	137.73	139.95	141.06	143.25	1.84
57. ELECTRONIC COMPONENTS & ACCESS.	73.18	76.41	80.30	83.64	86.13	88.03	3.76
58. MISC. ELECTRICAL MACH. & EQ.	25.47	26.39	27.48	27.83	28.22	28.48	2.26
59. MOTOR VEHICLES & EQUIPMENT	85.94	89.91	93.02	94.58	95.69	96.29	2.30
60. AIRCRAFT & PARTS	117.45	122.02	125.21	129.01	129.19	128.95	1.89
61. OTHER TRANSPORTATION EQ.	29.11	30.00	31.09	31.79	31.89	32.19	2.03
62. INSTRUMENTS & SUPPLIES	117.85	119.96	124.75	129.66	133.13	135.39	2.81
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	48.24	48.91	51.00	53.24	55.01	56.40	3.17
64. MISC. MANUFACTURING	85.25	86.43	89.08	91.47	92.78	93.33	1.83
65. TRANSPORTATION & WAREHOUSING	1,514.87	1,555.17	1,593.12	1,638.26	1,654.65	1,660.79	1.86
66. COMMUNICATION EXC. RADIO & TV	695.02	701.75	720.13	729.02	747.31	755.46	1.68
67. RADIO & TV BROADCASTING	91.27	94.37	97.17	98.78	99.80	100.83	2.01
68. UTILITIES	276.29	277.26	278.03	278.67	279.59	280.06	0.27
69. WHOLESALE & RETAIL TRADE	11,471.62	11,826.50	12,181.51	12,480.45	12,712.35	12,954.24	2.46
70. FINANCE & INSURANCE	3,542.16	3,605.82	3,683.78	3,782.20	3,886.48	3,985.94	2.39
71. REAL ESTATE & RENTAL	269.98	275.89	282.92	289.53	294.74	298.97	2.06
72. PERSONAL SERVICES EXC. AUTO.	871.46	884.23	901.04	918.11	935.29	950.34	1.75
73. BUSINESS SERVICES	1,014.24	1,052.26	1,094.30	1,142.90	1,184.99	1,219.75	3.76

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
52. BUSINESS PROFESSIONALS & STAFF  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
74. EATING & DRINKING PLACES	744.30	763.80	782.22	794.41	805.07	812.75	1.78
75. AUTOMOBILE REPAIR & SERVICE	185.85	189.26	190.77	191.52	192.49	193.96	0.86
76. AMUSEMENTS	236.30	239.03	245.16	250.42	256.10	261.26	2.03
77. MISC. SERVICES	5,253.46	5,314.20	5,389.84	5,503.87	5,637.26	5,787.16	1.95
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3,272.41	3,342.00	3,420.91	3,499.89	3,567.92	3,632.79	2.11
82. GOVERNMENT INDUSTRY	2,745.93	2,734.16	2,753.66	2,793.03	2,832.48	2,871.15	0.90
TOTAL, ALL INDUSTRIES	36,695.82	37,474.43	38,357.29	39,240.36	40,000.38	40,725.37	2.11

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
53. MANAGERS, OFFICIALS&PROPRIETORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.79
3. FORESTRY & FISHERY PRODUCTS	0.07	0.08	0.08	0.09	0.09	0.10	6.03
4. AGR., FORESTRY, & FISHERY SERV.	0.16	0.17	0.18	0.20	0.21	0.22	6.86
5. IRON ORE MINING	0.03	0.04	0.04	0.04	0.05	0.05	8.06
6. NONFERROUS METAL MINING	0.14	0.16	0.18	0.20	0.21	0.23	10.38
7. COAL MINING	0.29	0.33	0.36	0.39	0.43	0.45	9.00
8. CRUDE PETROLEUM & N. GAS	1.96	2.07	2.13	2.23	2.32	2.33	3.53
9. STONE & CLAY MINING & QUARRYING	0.25	0.28	0.31	0.35	0.38	0.40	9.91
10. CHEM & FERTILIZER MIN. MINING	0.03	0.03	0.04	0.04	0.04	0.05	7.91
11. NEW CONSTRUCTION	13.28	15.07	16.26	18.01	19.43	20.44	9.01
13. ORNANCE & ACCESSORIES	10.23	11.57	12.60	13.61	14.35	14.89	7.79
14. FOOD & KINDRED PRODUCTS	0.70	0.76	0.80	0.85	0.88	0.90	5.06
16. FABRIC, YARN & THREAD MILLS	0.15	0.16	0.16	0.17	0.18	0.18	4.91
17. MISC. TEXTILE GOODS	0.07	0.08	0.08	0.09	0.10	0.10	7.15
18. APPAREL	0.14	0.15	0.16	0.17	0.19	0.20	7.11
19. MISC. FABRICATED TEXTILE PROD.	0.29	0.31	0.32	0.34	0.35	0.37	4.69
20. LUMBER & WOOD PRODUCTS	0.52	0.59	0.64	0.70	0.76	0.81	9.27
21. WOOD CONTAINERS	0.14	0.16	0.17	0.19	0.21	0.22	9.83
22. HOUSEHOLD FURNITURE	0.06	0.07	0.07	0.07	0.08	0.07	3.70
23. OTHER FURNITURE & FIXTURES	0.14	0.15	0.15	0.16	0.17	0.18	4.62
24. PAPER & ALLIED PRODUCTS	0.40	0.44	0.47	0.51	0.53	0.55	6.39
25. PAPERBOARD CONTAINERS & BOXES	0.22	0.25	0.27	0.30	0.32	0.34	9.22
26. PRINTING & PUBLISHING	1.71	1.86	2.01	2.17	2.30	2.38	6.81
27. CHEMICALS & PRODUCTS	1.91	2.10	2.25	2.43	2.60	2.72	7.35
28. PLASTICS & SYNTHETIC MATLS.	0.27	0.31	0.34	0.37	0.40	0.41	8.70
29. DRUGS, CLEANING & TOILET PREP.	0.13	0.13	0.14	0.15	0.15	0.15	4.11
30. PAINTS & ALLIED PRODUCTS	0.26	0.29	0.31	0.34	0.37	0.38	8.20
31. PET REFINING & REL. PROD.	0.53	0.56	0.59	0.63	0.67	0.69	5.12
32. RUBBER & MISC. PLASTICS PROD.	1.01	1.15	1.29	1.46	1.61	1.71	11.20
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.02	0.02	0.02	0.02	6.52
35. GLASS & GLASS PRODUCTS	0.16	0.18	0.20	0.23	0.25	0.27	10.63
36. STONE & CLAY PRODUCTS	0.97	1.11	1.19	1.32	1.41	1.49	9.01
37. PRIMARY FERROUS METALS	1.23	1.37	1.48	1.61	1.72	1.79	7.85
38. NONFERROUS METALS	1.58	1.81	1.98	2.18	2.35	2.45	9.17
39. METAL CONTAINERS	0.04	0.05	0.05	0.05	0.06	0.06	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	1.72	1.94	2.07	2.23	2.37	2.50	7.75
41. SCREW MACHINE PROD. & STAMPINGS	0.90	1.00	1.08	1.18	1.25	1.30	7.72

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
53. MANAGERS, OFFICIALS & PROPRIETORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
42. OTHER FAB. METAL PRODUCTS	1.13	1.29	1.42	1.57	1.70	1.79	9.60
43. ENGINES & TURBINES	0.47	0.53	0.58	0.61	0.65	0.68	7.72
44. FARM & GARDEN MACHINERY	0.02	0.02	0.02	0.03	0.03	0.03	8.11
45. CONSTR. & MINING MACHINERY	0.16	0.17	0.18	0.20	0.20	0.21	5.29
46. MATERIALS HANDLING MACH. & EQ.	0.27	0.31	0.33	0.36	0.38	0.39	7.13
47. METALWORKING MACH. & EQ.	1.27	1.46	1.59	1.76	1.88	1.96	8.99
48. SPECIAL INDUSTRY MACHINERY	0.10	0.11	0.12	0.14	0.16	0.17	12.12
49. GENERAL INDUSTRY MACHINERY	0.77	0.86	0.92	0.99	1.04	1.08	7.08
50. MISC. NONELECTRICAL MACH.	2.25	2.44	2.66	2.91	3.08	3.16	7.05
51. OFFICE, COMPUTING & ACCT. MACH.	1.39	1.59	1.73	1.85	1.93	1.98	7.32
52. SERVICE INDUSTRY MACHINES	0.16	0.19	0.21	0.24	0.27	0.30	13.37
53. ELECTRICAL MACHINERY	0.76	0.87	0.95	1.05	1.13	1.19	9.43
54. HOUSEHOLD APPLIANCES	0.02	0.02	0.02	0.02	0.02	0.02	9.94
55. ELECTRIC LIGHTING & WIRING EQ.	0.54	0.62	0.67	0.73	0.79	0.83	8.96
56. RADIO, TV, & COMMUNICATION EQ.	16.41	18.73	20.43	21.99	22.99	23.34	7.30
57. ELECTRONIC COMPONENTS & ACCESS.	5.25	6.25	7.04	7.87	8.59	9.00	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.20	0.23	0.25	0.28	0.30	0.32	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.55	0.65	0.74	0.88	1.03	1.20	17.14
60. AIRCRAFT & PARTS	19.57	22.00	24.08	26.40	28.05	28.62	7.89
61. OTHER TRANSPORTATION EQ.	2.35	2.48	2.56	2.61	2.69	2.78	3.41
62. INSTRUMENTS & SUPPLIES	4.19	4.70	5.10	5.56	5.89	6.07	7.70
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.65	0.72	0.78	0.85	0.92	0.97	8.10
64. MISC. MANUFACTURING	0.27	0.29	0.31	0.33	0.35	0.36	5.76
65. TRANSPORTATION & WAREHOUSING	12.86	13.63	14.27	15.18	15.82	16.15	4.67
66. COMMUNICATION EXC. RADIO & TV	2.95	3.15	3.36	3.64	3.86	3.95	6.01
67. RADIO & TV BROADCASTING	0.67	0.74	0.79	0.86	0.90	0.93	7.00
68. UTILITIES	1.36	1.49	1.61	1.73	1.82	1.85	6.37
69. WHOLESALE & RETAIL TRADE	11.20	12.66	13.93	15.44	16.70	17.57	9.43
70. FINANCE & INSURANCE	5.94	6.72	7.42	8.24	8.93	9.36	9.51
71. REAL ESTATE & RENTAL	2.47	2.73	2.96	3.22	3.43	3.55	7.48
72. PERSONAL SERVICES EXC. AUTO.	5.44	6.13	6.67	7.31	7.83	8.23	8.64
73. BUSINESS SERVICES	9.95	11.19	12.29	13.57	14.56	15.15	8.76
74. EATING & DRINKING PLACES	6.19	7.12	7.96	8.87	9.61	10.07	10.22
75. AUTOMOBILE REPAIR & SERVICE	1.20	1.33	1.43	1.55	1.65	1.70	7.15
76. AMUSEMENTS	0.71	0.78	0.84	0.92	0.99	1.04	8.04
77. MISC. SERVICES	8.36	8.56	8.89	9.40	9.82	10.03	3.71
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	72.14	75.98	80.13	84.86	88.01	89.75	4.46
82. GOVERNMENT INDUSTRY	51.77	51.01	52.25	53.96	55.12	55.75	1.49
TOTAL, ALL INDUSTRIES	293.70	316.52	338.01	363.08	381.93	392.95	6.00

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## TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
53. MANAGERS, OFFICIALS&PROPRIETORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
2. OTHER AGRICULTURAL PRODUCTS	5.68	5.70	5.73	5.71	5.70	5.69	0.05
3. FORESTRY & FISHERY PRODUCTS	2.88	3.04	3.24	3.38	3.39	3.35	3.07
4. AGR., FORESTRY, & FISHERY SERV.	8.47	8.70	8.80	8.99	9.10	9.24	0.76
5. IRDN ORE MINING	0.64	0.68	0.73	0.73	0.71	0.70	1.89
6. NONFERROUS METAL MINING	2.37	2.49	2.58	2.63	2.60	2.60	1.85
7. COAL MINING	10.40	10.92	11.32	11.60	11.98	12.24	3.31
8. CRUDE PETROLEUM & N. GAS	26.53	26.33	26.10	25.44	24.91	24.95	-1.23
9. STONE&CLAY MINING & QUARRYING	8.00	8.16	8.44	8.79	8.98	9.06	2.51
10. CHEM&FERTILIZER MIN. MINING	1.53	1.57	1.82	1.66	1.68	1.69	2.01
11. NEW CONSTRUCTION	353.46	362.19	370.80	383.84	394.38	401.10	2.56
13. ORDNANCE & ACCESSORIES	16.93	17.30	17.60	17.99	18.22	18.41	1.69
14. FOOD & KINDRED PRODUCTS	104.93	106.34	106.98	106.56	105.50	104.62	-0.08
16. FABRIC, YARN & THREAD MILLS	11.66	11.99	12.28	12.50	12.59	12.58	1.52
17. MISC. TEXTILE GOODS	4.88	5.06	5.27	5.45	5.54	5.59	2.76
18. APPAREL	39.32	40.05	41.37	42.57	43.03	43.45	2.02
19. MISC. FABRICATED TEXTILE PROD.	9.91	10.16	10.43	10.63	10.76	10.87	1.86
20. LUMBER & WOOD PRODUCTS	25.11	27.27	28.40	29.55	29.93	29.74	3.44
21. WOOD CONTAINERS	2.31	2.30	2.35	2.40	2.43	2.44	1.17
22. HOUSEHOLD FURNITURE	10.70	11.29	11.66	12.05	12.31	12.43	3.03
23. OTHER FURNITURE & FIXTURES	8.96	9.03	9.31	9.59	9.79	9.99	2.20
24. PAPER & ALLIED PRODUCTS	21.52	22.10	22.28	22.30	22.22	22.14	0.58
25. PAPERBOARD CONTAINERS & BOXES	9.98	10.29	10.57	10.82	10.98	11.09	2.13
26. PRINTING & PUBLISHING	108.79	109.95	111.51	113.04	114.17	115.20	1.15
27. CHEMICALS & PRODUCTS	39.65	40.28	40.79	41.09	41.23	41.35	0.85
28. PLASTICS & SYNTHETIC MATLS.	11.32	11.73	12.16	12.47	12.64	12.68	2.30
29. DRUGS, CLEANING & TOILET PREP.	35.73	35.95	36.49	36.92	36.92	37.01	0.71
30. PAINTS & ALLIED PRODUCTS	4.93	5.16	5.34	5.53	5.64	5.70	2.97
31. PET REFINING & REL. PROD.	9.91	9.89	9.94	10.02	10.03	10.01	0.19
32. RUBBER & MISC. PLASTICS PROD.	37.05	38.68	40.63	42.29	43.70	44.45	3.71
34. FDOTWEAR & OTHER LEATHER PROD.	5.14	5.22	5.30	5.35	5.37	5.39	0.96
35. GLASS & GLASS PRODUCTS	7.28	7.51	7.74	7.90	7.96	7.97	1.82
36. STONE & CLAY PRDDUCTS	29.94	30.75	31.47	32.48	32.82	32.62	1.73
37. PRIMARY FERROUS METALS	17.22	17.75	18.31	18.54	18.62	18.54	1.48
38. NONFERROUS METALS	18.68	19.34	20.10	20.65	20.98	21.22	2.59
39. METAL CONTAINERS	2.93	2.89	2.90	2.95	2.97	2.98	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	38.56	38.69	39.69	41.06	41.98	42.59	2.01



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
53. MANAGERS, OFFICIALS & PROPRIETORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROD. & STAMPINGS	14.65	15.40	15.90	16.17	16.26	16.32	2.19
42. OTHER FAB. METAL PRODUCTS	24.63	25.37	26.45	27.24	27.82	28.43	2.91
43. ENGINES & TURBINES	5.61	5.79	6.01	6.07	6.10	6.13	1.78
44. FARM & GARDEN MACHINERY	6.18	6.35	6.68	6.77	6.84	6.92	2.27
45. CONSTR. & MINING MACHINERY	13.49	13.98	14.44	14.68	14.80	14.71	1.76
46. MATERIALS HANDLING MACH. & EQ.	4.82	4.88	5.08	5.19	5.24	5.26	1.74
47. METALWORKING MACH. & EQ.	24.72	25.63	27.06	28.07	28.78	29.29	3.41
48. SPECIAL INDUSTRY MACHINERY	13.20	13.49	14.17	14.81	15.18	15.51	3.28
49. GENERAL INDUSTRY MACHINERY	17.52	17.88	18.64	19.06	19.31	19.54	2.21
50. MISC. NONELECTRICAL MACH.	19.65	20.06	20.81	21.18	21.28	21.44	1.76
51. OFFICE, COMPUTING & ACCT. MACH.	36.91	38.37	39.99	40.71	41.28	42.21	2.72
52. SERVICE INDUSTRY MACHINES	8.86	9.20	9.64	9.80	9.82	9.83	2.10
53. ELECTRICAL MACHINERY	15.20	15.51	16.26	16.68	16.91	17.07	2.36
54. HOUSEHOLD APPLIANCES	6.13	6.32	6.52	6.77	6.94	7.06	2.88
55. ELECTRIC LIGHTING & WIRING EQ.	11.34	11.51	11.90	12.27	12.52	12.75	2.37
56. RADIO, TV, & COMMUNICATION EQ.	38.85	39.45	40.39	40.78	40.85	41.24	1.20
57. ELECTRONIC COMPONENTS & ACCESS.	23.98	25.01	26.25	27.32	28.10	28.69	3.65
58. MISC. ELECTRICAL MACH. & EQ.	7.45	7.71	8.02	8.11	8.21	8.28	2.12
59. MOTOR VEHICLES & EQUIPMENT	28.24	29.52	30.53	31.01	31.36	31.53	2.23
60. AIRCRAFT & PARTS	39.21	40.51	41.35	42.37	42.20	41.90	1.34
61. OTHER TRANSPORTATION EQ.	8.10	8.34	8.64	8.84	8.86	8.94	2.00
62. INSTRUMENTS & SUPPLIES	36.01	36.44	37.69	38.96	39.80	40.26	2.26
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	15.10	15.25	15.83	16.47	16.94	17.31	2.76
64. MISC. MANUFACTURING	24.47	24.78	25.52	26.18	26.53	26.66	1.73
65. TRANSPORTATION & WAREHOUSING	302.43	310.11	317.31	325.93	328.82	329.67	1.74
66. COMMUNICATION EXC. RADIO & TV	119.05	120.95	124.87	127.15	131.09	133.25	2.28
67. RADIO & TV BROADCASTING	33.53	34.16	34.68	34.78	34.69	34.62	0.64
68. UTILITIES	63.23	63.54	63.80	64.03	64.32	64.51	0.40
69. WHOLESALE & RETAIL TRADE	1,830.28	1,885.71	1,941.14	1,987.62	2,023.41	2,080.79	2.40
70. FINANCE & INSURANCE	693.70	706.38	721.86	741.36	762.00	781.70	2.42
71. REAL ESTATE & RENTAL	89.92	90.98	92.42	93.74	94.83	95.23	1.15
72. PERSONAL SERVICES, EXC. AUTO.	296.63	302.07	308.88	315.78	322.72	328.94	2.09
73. BUSINESS SERVICES	205.13	211.90	219.47	228.35	235.90	242.00	3.36
74. EATING & DRINKING PLACES	400.56	409.75	418.39	423.74	428.32	431.36	1.49
75. AUTOMOBILE REPAIR & SERVICE	82.95	84.46	85.12	85.44	85.87	86.51	0.85
76. AMUSEMENTS	72.47	73.19	74.96	76.46	78.08	79.55	1.86
77. MISC. SERVICES	1,295.38	1,307.74	1,323.79	1,349.27	1,379.48	1,413.69	1.76
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1,812.48	1,847.95	1,888.53	1,929.48	1,964.40	1,997.15	1.96
82. GOVERNMENT INDUSTRY	629.95	627.44	631.83	640.13	648.56	658.55	0.89



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
53. MANAGERS, OFFICIALS & PROPRIETORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
TOTAL, ALL INDUSTRIES	9,430.72	9,615.30	9,826.44	10,039.52	10,221.22	10,391.59	1.98

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
54. SALES WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	2.89
2. OTHER AGRICULTURAL PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	2.77
4. AGR. FORESTRY, & FISHERY SERV.	0.04	0.04	0.04	0.05	0.05	0.05	6.87
7. COAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	9.12
8. CRUDE PETROLEUM & N. GAS	0.15	0.16	0.16	0.17	0.18	0.18	4.22
9. STONE & CLAY MINING & QUARRYING	0.03	0.03	0.04	0.04	0.05	0.05	10.09
11. NEW CONSTRUCTION	1.49	1.69	1.82	2.02	2.18	2.29	9.02
13. DRDNANCE & ACCESSORIES	1.04	1.19	1.32	1.44	1.53	1.60	8.95
14. FOOD & KINDRED PRODUCTS	0.40	0.43	0.45	0.48	0.49	0.50	4.82
16. FABRIC, YARN & THREAD MILLS	0.02	0.02	0.02	0.03	0.03	0.03	4.99
17. MISC. TEXTILE GOODS	0.04	0.04	0.04	0.05	0.05	0.05	7.17
18. APPAREL	0.08	0.08	0.07	0.07	0.08	0.08	7.11
19. MISC. FABRICATED TEXTILE PROD.	0.09	0.10	0.10	0.11	0.11	0.11	4.89
20. LUMBER & WOOD PRODUCTS	0.15	0.17	0.18	0.20	0.22	0.24	9.92
21. WOOD CONTAINERS	0.03	0.03	0.04	0.04	0.04	0.04	9.83
22. HOUSEHOLD FURNITURE	0.04	0.04	0.04	0.05	0.05	0.05	3.70
23. DTHR FURNITURE & FIXTURES	0.05	0.06	0.06	0.06	0.06	0.07	4.48
24. PAPER & ALLIED PRODUCTS	0.15	0.16	0.16	0.19	0.20	0.21	7.07
25. PAPERBOARD CONTAINERS & BDXES	0.15	0.17	0.19	0.21	0.22	0.24	9.30
26. PRINTING & PUBLISHING	1.27	1.38	1.49	1.61	1.70	1.75	8.82
27. CHEMICALS & PRODUCTS	0.55	0.61	0.65	0.70	0.75	0.78	8.97
28. PLASTICS & SYNTHETIC MATLS.	0.04	0.05	0.05	0.06	0.06	0.06	8.71
29. DRUGS, CLEANING & TOILET PREP.	0.13	0.13	0.14	0.15	0.15	0.16	3.94
30. PAINTS & ALLIED PRODUCTS	0.27	0.30	0.32	0.35	0.38	0.40	8.20
31. PET REFINING & REL. PROD.	0.11	0.12	0.12	0.13	0.14	0.14	5.59
32. RUBBER & MISC. PLASTICS PROD.	0.30	0.34	0.38	0.43	0.47	0.50	11.06
34. FDOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.01	0.01	8.19
35. GLASS & GLASS PRODUCTS	0.05	0.06	0.06	0.07	0.08	0.08	11.18
36. STONE & CLAY PRODUCTS	0.29	0.34	0.36	0.40	0.43	0.45	9.00
37. PRIMARY FERROUS METALS	0.25	0.27	0.30	0.32	0.34	0.36	7.95
38. NONFERROUS METALS	0.30	0.35	0.38	0.42	0.45	0.47	9.25
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	8.80
40. FAB. STRUCTURAL METAL PRODUCTS	0.87	0.75	0.81	0.87	0.92	0.98	7.88
41. SCREW MACHINE PROD. & STAMPINGS	0.24	0.27	0.29	0.31	0.33	0.35	7.73
42. OTHER FAB. METAL PRODUCTS	0.33	0.38	0.42	0.46	0.51	0.54	10.49
43. ENGINES & TURBINES	0.02	0.03	0.03	0.03	0.03	0.03	7.74
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.11

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
54. SALES WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
45. CONSTR. & MINING MACHINERY	0.06	0.07	0.07	0.08	0.08	0.08	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.10	0.12	0.13	0.14	0.15	0.16	9.12
47. METALWORKING MACH. & EQ.	0.33	0.38	0.41	0.46	0.49	0.51	9.36
48. SPECIAL INDUSTRY MACHINERY	0.04	0.04	0.05	0.06	0.06	0.07	12.06
49. GENERAL INDUSTRY MACHINERY	0.23	0.25	0.27	0.30	0.31	0.33	7.51
50. MISC. NONELECTRICAL MACH.	0.31	0.34	0.37	0.41	0.44	0.45	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.15	0.18	0.21	0.23	0.24	0.26	10.76
52. SERVICE INDUSTRY MACHINES	0.07	0.08	0.09	0.10	0.11	0.13	13.37
53. ELECTRICAL MACHINERY	0.16	0.18	0.20	0.22	0.23	0.24	9.11
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.18	0.20	0.22	0.24	0.25	0.27	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.89	1.94	2.13	2.32	2.44	2.49	8.09
57. ELECTRONIC COMPONENTS & ACCESS.	0.70	0.83	0.94	1.05	1.14	1.20	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.08	0.07	0.08	0.09	0.10	0.10	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.08	0.10	0.11	0.13	0.16	0.18	17.14
60. AIRCRAFT & PARTS	2.00	2.27	2.50	2.76	2.95	3.03	8.59
61. OTHER TRANSPORTATION EQ.	0.28	0.30	0.31	0.31	0.33	0.34	3.5
62. INSTRUMENTS & SUPPLIES	1.28	1.46	1.61	1.77	1.90	1.98	9.0
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.17	0.19	0.21	0.23	0.25	0.27	9.14
64. MISC. MANUFACTURING	0.12	0.13	0.14	0.15	0.16	0.16	4.90
65. TRANSPORTATION & WAREHOUSING	3.26	3.54	3.80	4.14	4.41	4.60	7.17
66. COMMUNICATION EXC. RADIO & TV	0.81	0.85	0.69	0.75	0.79	0.81	5.69
67. RADIO & TV BROADCASTING	0.49	0.56	0.62	0.69	0.75	0.79	10.18
68. UTILITIES	0.14	0.15	0.16	0.17	0.18	0.18	6.34
69. WHOLESALE & RETAIL TRADE	30.72	34.70	38.20	42.30	45.76	48.14	9.40
70. FINANCE & INSURANCE	2.85	3.22	3.54	3.93	4.25	4.45	9.35
71. REAL ESTATE & RENTAL	2.09	2.34	2.58	2.85	3.07	3.21	9.03
72. PERSONAL SERVICES EXC. AUTO.	1.47	1.66	1.80	1.98	2.12	2.23	8.66
73. BUSINESS SERVICES	4.33	4.84	5.29	5.81	6.20	6.42	8.17
74. EATING & DRINKING PLACES	1.01	1.15	1.28	1.42	1.54	1.60	9.76
75. AUTOMOBILE REPAIR & SERVICE	0.22	0.24	0.26	0.28	0.29	0.30	6.63
76. AMUSEMENTS	0.33	0.36	0.39	0.43	0.46	0.48	7.92
77. MISC. SERVICES	0.40	0.41	0.43	0.45	0.48	0.49	4.47
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	16.69	18.32	19.88	21.57	22.88	23.72	7.28
82. GOVERNMENT INDUSTRY	12.60	12.37	12.64	13.01	13.25	13.37	1.20
TOTAL, ALL INDUSTRIES	94.06	103.53	112.27	122.44	130.64	136.02	7.66

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
54. SALES WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	3.23	3.26	3.21	3.15	3.13	3.10	-0.81
2. OTHER AGRICULTURAL PRODUCTS	23.40	23.49	23.60	23.52	23.47	23.44	0.03
4. AGR., FORESTRY, & FISHERY SERV.	1.99	2.05	2.07	2.12	2.14	2.18	1.77
7. COAL MINING	0.23	0.24	0.25	0.26	0.27	0.27	3.42
8. CRUDE PETROLEUM & N. GAS	1.98	1.98	1.98	1.94	1.91	1.93	-0.57
9. STONE & CLAY MINING & QUARRYING	0.97	0.99	1.02	1.07	1.09	1.10	2.68
11. NEW CONSTRUCTION	39.55	40.54	41.51	42.97	44.16	44.92	2.58
13. ORDNANCE & ACCESSORIES	1.73	1.79	1.84	1.90	1.94	1.98	2.78
14. FOOD & KINDRED PRODUCTS	60.17	60.72	60.82	60.34	59.49	58.74	-0.48
16. FABRIC, YARN & THREAD MILLS	1.78	1.83	1.88	1.91	1.93	1.93	1.60
17. MISC. TEXTILE GOODS	2.55	2.64	2.75	2.85	2.89	2.92	2.77
18. APPAREL	16.24	16.54	17.09	17.58	17.77	17.95	2.02
19. MISC. FABRICATED TEXTILE PROD.	3.09	3.17	3.26	3.32	3.36	3.39	1.86
20. LUMBER & WOOD PRODUCTS	7.16	7.83	8.20	8.58	8.74	8.74	4.06
21. WOOD CONTAINERS	0.47	0.47	0.47	0.49	0.49	0.49	1.17
22. HOUSEHOLD FURNITURE	6.57	6.93	7.15	7.39	7.56	7.63	3.03
23. OTHER FURNITURE & FIXTURES	3.39	3.41	3.51	3.61	3.69	3.76	2.05
24. PAPER & ALLIED PRODUCTS	8.01	8.28	8.40	8.46	8.48	8.50	1.21
25. PAPERBOARD CONTAINERS & BOXES	6.89	7.11	7.31	7.48	7.60	7.68	2.20
26. PRINTING & PUBLISHING	80.98	81.70	82.70	83.69	84.38	85.01	0.97
27. CHEMICALS & PRODUCTS	11.51	11.65	11.76	11.80	11.80	11.80	0.49
28. PLASTICS & SYNTHETIC MATLS.	1.71	1.78	1.84	1.89	1.91	1.92	2.31
29. DRUGS, CLEANING & TOILET PREP.	36.28	36.45	36.93	37.31	37.25	37.28	0.55
30. PAINTS & ALLIED PRODUCTS	5.08	5.32	5.50	5.69	5.81	5.88	2.97
31. PET REFINING & REL. PROD.	2.03	2.04	2.06	2.08	2.09	2.10	0.64
32. RUBBER & MISC. PLASTICS PROD.	10.96	11.42	11.99	12.46	12.86	13.07	3.58
34. FOOTWEAR & OTHER LEATHER PROD.	2.77	2.80	2.83	2.85	2.85	2.86	0.64
35. GLASS & GLASS PRODUCTS	2.22	2.30	2.38	2.44	2.47	2.49	2.31
36. STONE & CLAY PRODUCTS	9.13	9.38	9.60	9.90	10.01	9.94	1.72
37. PRIMARY FERROUS METALS	3.44	3.55	3.66	3.71	3.73	3.72	1.58
38. NONFERROUS METALS	3.60	3.73	3.88	3.99	4.05	4.10	2.67
39. METAL CONTAINERS	0.70	0.69	0.69	0.70	0.71	0.71	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	14.98	15.05	15.46	16.01	16.39	16.65	2.14
41. SCREW MACHINE PROD. & STAMPINGS	3.88	4.08	4.21	4.29	4.31	4.33	2.20
42. OTHER FAB. METAL PRODUCTS	7.09	7.37	7.75	8.05	8.28	8.53	3.75
43. ENGINES & TURBINES	0.28	0.29	0.30	0.30	0.30	0.31	1.80
44. FARM & GARDEN MACHINERY	2.19	2.24	2.38	2.39	2.42	2.45	2.27
45. CONSTR. & MINING MACHINERY	5.02	5.31	5.59	5.79	5.94	6.01	3.64
46. MATERIALS HANDLING MACH. & EQ.	1.80	1.85	1.96	2.05	2.10	2.15	3.62

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
54. SALES WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
47. METALWORKING MACH. & EQ.	6.36	6.62	7.02	7.30	7.51	7.65	3.76
48. SPECIAL INDUSTRY MACHINERY	5.25	5.37	5.63	5.89	6.03	6.16	3.22
49. GENERAL INDUSTRY MACHINERY	5.18	5.31	5.56	5.71	5.80	5.90	2.62
50. MISC. NONELECTRICAL MACH.	2.72	2.79	2.91	2.98	3.01	3.04	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	4.09	4.42	4.76	5.00	5.22	5.48	6.02
52. SERVICE INDUSTRY MACHINES	3.78	3.93	4.11	4.18	4.19	4.19	2.10
53. ELECTRICAL MACHINERY	3.17	3.23	3.37	3.45	3.49	3.51	2.06
54. HOUSEHOLD APPLIANCES	2.57	2.64	2.72	2.81	2.87	2.91	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	3.74	3.77	3.87	3.96	4.02	4.07	1.70
56. RADIO, TV, & COMMUNICATION EQ.	4.00	4.09	4.22	4.29	4.33	4.40	1.95
57. ELECTRONIC COMPONENTS & ACCESS.	3.19	3.33	3.49	3.63	3.74	3.82	3.65
58. MISC. ELECTRICAL MACH. & EQ.	2.36	2.45	2.54	2.57	2.61	2.63	2.12
59. MOTOR VEHICLES & EQUIPMENT	4.26	4.46	4.61	4.68	4.73	4.76	2.23
60. AIRCRAFT & PARTS	4.01	4.17	4.29	4.42	4.43	4.43	2.00
61. OTHER TRANSPORTATION EQ.	0.97	1.00	1.04	1.07	1.07	1.08	2.10
62. INSTRUMENTS & SUPPLIES	11.04	11.32	11.87	12.43	12.85	13.16	3.59
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	3.99	4.07	4.27	4.48	4.66	4.80	3.75
64. MISC. MANUFACTURING	11.28	11.33	11.57	11.77	11.83	11.80	0.91
65. TRANSPORTATION & WAREHOUSING	76.63	80.59	84.50	88.86	91.71	93.99	4.17
66. COMMUNICATION EXC. RADIO & TV	24.77	25.08	25.81	26.21	26.94	27.30	1.97
67. RADIO & TV BROADCASTING	24.66	25.96	27.19	28.07	28.77	29.46	3.63
68. UTILITIES	6.31	6.34	6.36	6.38	6.41	6.43	0.36
69. WHOLESALE & RETAIL TRADE	5,020.74	5,171.13	5,321.48	5,447.26	5,543.75	5,644.58	2.37
70. FINANCE & INSURANCE	332.46	337.99	344.86	353.64	362.97	371.85	2.26
71. REAL ESTATE & RENTAL	75.85	78.00	80.45	82.77	84.68	86.30	2.61
72. PERSONAL SERVICES EXC. AUTO.	80.18	81.67	83.53	85.41	87.31	89.01	2.11
73. BUSINESS SERVICES	89.30	91.70	94.43	97.72	100.43	102.52	2.80
74. EATING & DRINKING PLACES	65.15	66.32	67.42	67.99	68.45	68.66	1.06
75. AUTOMOBILE REPAIR & SERVICE	15.00	15.22	15.30	15.31	15.34	15.42	0.55
76. AMUSEMENTS	33.60	33.69	34.67	35.32	36.03	36.67	1.76
77. MISC. SERVICES	61.22	62.29	63.53	65.22	67.15	69.28	2.51
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1,079.12	1,109.35	1,140.42	1,167.44	1,188.57	1,209.69	2.31
82. GOVERNMENT INDUSTRY	36.80	36.83	37.29	38.06	38.84	39.47	1.41
TOTAL, ALL INDUSTRIES	7,499.81	7,709.90	7,925.86	8,113.58	8,260.45	8,407.23	2.31

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
55. CLERICAL WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.05	0.05	0.05	0.05	0.05	0.08	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.09	0.09	0.09	0.10	0.10	0.10	3.33
3. FORESTRY & FISHERY PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	5.65
4. AGR., FORESTRY, & FISHERY SERV.	0.28	0.29	0.30	0.33	0.35	0.37	7.34
5. IRON ORE MINING	0.09	0.10	0.11	0.12	0.12	0.13	8.06
6. NONFERROUS METAL MINING	0.22	0.28	0.29	0.32	0.34	0.36	10.56
7. COAL MINING	0.32	0.37	0.40	0.44	0.48	0.51	9.45
8. CRUDE PETROLEUM & N. GAS	3.21	3.42	3.54	3.74	3.93	3.97	4.34
9. STONE & CLAY MINING & QUARRYING	0.27	0.30	0.33	0.37	0.40	0.43	9.95
10. CHEM & FERTILIZER MIN. MINING	0.03	0.03	0.03	0.04	0.04	0.04	7.92
11. NEW CONSTRUCTION	10.28	11.73	12.71	14.14	15.32	16.18	9.49
13. ORDNANCE & ACCESSORIES	18.09	20.53	22.46	24.35	25.78	26.84	8.21
14. FOOD & KINDRED PRODUCTS	1.10	1.20	1.26	1.34	1.39	1.43	5.30
15. TOBACCO MANUFACTURE	0.01	0.01	0.01	0.01	0.01	0.01	7.10
16. FABRIC, YARN & TEXTILE MILLS	0.36	0.39	0.41	0.43	0.46	0.47	5.23
17. MISC. TEXTILE GOODS	0.16	0.20	0.21	0.23	0.24	0.25	7.09
18. APPAREL	0.38	0.40	0.42	0.45	0.48	0.51	8.02
19. MISC. FABRICATED TEXTILE PROD.	0.64	0.68	0.71	0.75	0.78	0.81	4.81
20. LUMBER & WOOD PRODUCTS	0.66	0.75	0.81	0.89	0.96	1.04	9.67
21. WOOD CONTAINERS	0.12	0.14	0.15	0.17	0.18	0.19	9.60
22. HOUSEHOLD FURNITURE	0.15	0.18	0.17	0.18	0.18	0.18	3.64
23. OTHER FURNITURE & FIXTURES	0.26	0.30	0.31	0.32	0.34	0.36	4.67
24. PAPER & ALLIED PRODUCTS	0.63	0.92	1.00	1.07	1.13	1.17	6.97
25. PAPERBOARD CONTAINERS & BOXES	0.41	0.45	0.50	0.55	0.59	0.62	6.94
26. PRINTING & PUBLISHING	4.41	4.60	5.15	5.55	5.65	6.03	6.42
27. CHEMICALS & PRODUCTS	2.91	3.21	3.45	3.75	4.03	4.22	7.71
28. PLASTICS & SYNTHETIC MATLS.	0.36	0.43	0.47	0.52	0.56	0.59	9.05
29. DRUGS, CLEANING & TOILET PREP.	0.24	0.28	0.27	0.29	0.30	0.30	4.54
30. PAINTS & ALLIED PRODUCTS	0.50	0.55	0.60	0.66	0.71	0.75	6.41
31. PET REFINING & REL. PROD.	1.16	1.23	1.30	1.39	1.46	1.50	5.17
32. RUBBER & MISC. PLASTICS PROD.	1.61	1.62	2.03	2.26	2.50	2.65	10.53
33. LEATHER TANNING & FINISHING	0.01	0.01	0.01	0.01	0.01	0.01	5.37
34. FOOTWEAR & OTHER LEATHER PROD.	0.04	0.05	0.05	0.05	0.05	0.06	5.60
35. GLASS & GLASS PRODUCTS	0.29	0.34	0.37	0.42	0.46	0.49	10.63
36. STONE & CLAY PRODUCTS	1.25	1.43	1.54	1.70	1.82	1.92	6.66
37. PRIMARY FERROUS METALS	3.27	3.63	3.92	4.27	4.54	4.73	7.66
38. NONFERROUS METALS	2.85	3.27	3.60	3.98	4.29	4.50	9.55

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
55. CLERICAL WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
39. METAL CONTAINERS	0.07	0.07	0.08	0.08	0.09	0.09	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	2.77	3.13	3.35	3.62	3.65	4.07	6.00
41. SCREW MACHINE PROD.&STAMPINGS	1.53	1.72	1.65	2.02	2.15	2.24	7.69
42. OTHER FAB. METAL PRODUCTS	1.61	2.08	2.26	2.53	2.75	2.91	9.88
43. ENGINES & TURBINES	0.97	1.10	1.20	1.28	1.35	1.42	7.93
44. FARM & GARDEN MACHINERY	0.04	0.05	0.05	0.06	0.06	0.07	8.49
45. CONSTR. & MINING MACHINERY	0.39	0.43	0.47	0.51	0.54	0.55	7.29
46. MATERIALS HANDLING MACH. & EQ.	0.67	0.77	0.84	0.92	0.99	1.04	9.17
47. METALWORKING MACH. & EQ.	1.85	2.12	2.34	2.59	2.79	2.91	9.56
48. SPECIAL INDUSTRY MACHINERY	0.17	0.19	0.21	0.25	0.28	0.30	12.26
49. GENERAL INDUSTRY MACHINERY	1.75	1.97	2.13	2.29	2.44	2.54	7.71
50. MISC. NONELECTRICAL MACH.	2.14	2.34	2.58	2.84	3.03	3.13	7.89
51. OFFICE, COMPUTING & ACCT. MACH.	2.39	2.74	2.96	3.21	3.35	3.45	7.56
52. SERVICE INDUSTRY MACHINES	0.37	0.43	0.46	0.55	0.62	0.70	13.60
53. ELECTRICAL MACHINERY	1.76	2.02	2.21	2.43	2.63	2.75	9.28
54. HOUSEHOLD APPLIANCES	0.03	0.03	0.04	0.04	0.04	0.05	9.71
55. ELECTRIC LIGHTING & WIRING EQ.	1.03	1.17	1.25	1.36	1.46	1.55	6.42
56. RADIO, TV, & COMMUNICATION EQ.	37.14	42.79	47.10	51.17	53.94	55.25	6.26
57. ELECTRONIC COMPONENTS & ACCESS.	10.08	12.02	13.55	15.19	16.60	17.42	11.56
58. MISC. ELECTRICAL MACH. & EQ.	0.42	0.49	0.53	0.59	0.64	0.68	9.80
59. MOTOR VEHICLES & EQUIPMENT	1.03	1.23	1.40	1.67	1.96	2.29	17.28
60. AIRCRAFT & PARTS	37.06	42.00	46.35	51.23	54.88	56.43	6.77
61. OTHER TRANSPORTATION EQ.	5.81	6.13	6.33	6.46	6.67	6.86	3.46
62. INSTRUMENTS & SUPPLIES	8.24	9.31	10.18	11.16	11.91	12.36	8.44
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.26	1.39	1.52	1.67	1.81	1.91	8.66
64. MISC. MANUFACTURING	0.55	0.60	0.63	0.68	0.72	0.74	6.12
65. TRANSPORTATION & WAREHOUSING	48.28	51.17	53.56	56.96	59.37	60.61	4.65
66. COMMUNICATION EXC. RADIO & TV	13.68	14.46	15.31	16.47	17.34	17.66	5.24
67. RADIO & TV BROADCASTING	0.66	0.74	0.81	0.89	0.94	0.99	8.56
68. UTILITIES	4.45	4.87	5.24	5.62	5.90	6.01	6.19
69. WHOLESALE & RETAIL TRADE	28.27	32.01	35.31	39.18	42.47	44.76	9.63
70. FINANCE & INSURANCE	21.55	24.37	26.90	29.86	32.35	33.91	9.49
71. REAL ESTATE & RENTAL	2.87	3.21	3.53	3.89	4.19	4.38	8.82
72. PERSONAL SERVICES EXC. AUTO.	9.07	10.15	10.99	11.97	12.74	13.32	7.99
73. BUSINESS SERVICES	34.93	39.53	43.69	48.53	52.37	54.79	9.42
74. EATING & DRINKING PLACES	4.31	5.00	5.64	6.33	6.92	7.30	11.14
75. AUTOMOBILE REPAIR & SERVICE	1.27	1.41	1.52	1.65	1.75	1.81	7.23
76. AMUSEMENTS	1.27	1.40	1.52	1.67	1.80	1.90	6.36
77. MISC. SERVICES	25.16	25.62	26.86	28.49	29.63	30.55	3.96

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
55. CLERICAL WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	16.04	16.67	17.51	18.49	19.17	19.54	4.03
82. GOVERNMENT INDUSTRY	203.24	199.70	203.99	210.08	214.00	215.91	1.22
TOTAL, ALL INDUSTRIES	593.38	632.62	673.42	721.80	759.01	780.93	5.65
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	8.03	8.10	7.98	7.83	7.78	7.71	-0.81
2. OTHER AGRICULTURAL PRODUCTS	58.85	59.40	60.01	60.12	60.32	60.56	0.58
3. FORESTRY & FISHERY PRODUCTS	1.18	1.24	1.31	1.36	1.36	1.34	2.70
4. AGR., FORESTRY, & FISHERY SERV.	14.17	14.63	14.66	15.25	15.50	15.81	2.22
5. IRON ORE MINING	1.70	1.83	1.96	1.94	1.91	1.87	1.91
6. NONFERROUS METAL MINING	3.79	3.99	4.13	4.22	4.18	4.19	2.04
7. COAL MINING	11.51	12.15	12.65	13.02	13.49	13.83	3.74
8. CRUDE PETROLEUM & N. GAS	43.48	43.48	43.44	42.67	42.11	42.50	-0.45
9. STONE & CLAY MINING & QUARRYING	8.49	8.67	8.96	9.34	9.55	9.63	2.55
10. CHEM & FERTILIZER MIN. MINING	1.37	1.40	1.45	1.48	1.50	1.51	2.02
11. NEW CONSTRUCTION	273.70	281.83	289.87	301.37	310.92	317.45	3.01
13. ORONANCE & ACCESSORIES	29.92	30.71	31.36	32.20	32.73	33.18	2.09
14. FOOD & KINDRED PRODUCTS	165.17	167.78	169.15	168.91	167.61	166.61	0.17
15. TOBACCO MANUFACTURES	6.96	6.96	6.87	6.75	6.67	6.55	-1.20
16. FABRIC, YARN & THREAD MILLS	29.17	30.07	30.91	31.55	31.87	31.95	1.83
17. MISC. TEXTILE GOODS	12.37	12.83	13.36	13.80	14.02	14.12	2.69
18. APPAREL	104.96	105.79	108.15	110.15	110.24	110.25	0.99
19. MISC. FABRICATED TEXTILE PROD.	21.66	22.24	22.87	23.34	23.65	23.90	1.99
20. LUMBER & WOOD PRODUCTS	31.79	34.66	36.23	37.83	38.46	38.35	3.82
21. WOOD CONTAINERS	2.02	2.02	2.06	2.11	2.13	2.14	1.14
22. HOUSEHOLD FURNITURE	25.62	27.06	27.99	28.97	29.64	29.95	3.18
23. OTHER FURNITURE & FIXTURES	17.85	17.99	18.56	19.13	19.54	19.95	2.25
24. PAPER & ALLIED PRODUCTS	44.79	46.26	46.89	47.19	47.28	47.35	1.12
25. PAPERBOARD CONTAINERS & BOXES	18.43	18.95	19.42	19.81	20.06	20.21	1.86
26. PRINTING & PUBLISHING	281.03	282.94	285.88	288.75	290.62	292.28	0.79
27. CHEMICALS & PRODUCTS	60.46	61.65	62.65	63.33	63.75	64.14	1.19
28. PLASTICS & SYNTHETIC MATLS.	15.81	16.44	17.10	17.59	17.88	18.00	2.64
29. DRUGS, CLEANING & TOILET PREP.	68.76	69.50	70.83	71.96	72.24	72.70	1.12
30. PAINTS & ALLIED PRODUCTS	9.49	9.96	10.33	10.71	10.95	11.10	3.17
31. PET REFINING & REL. PROD.	21.61	21.58	21.69	21.61	21.91	21.87	0.24
32. RUBBER & MISC. PLASTICS PROD.	59.05	61.19	63.91	66.72	67.94	68.75	3.09
33. LEATHER TANNING & FINISHING	1.16	1.20	1.24	1.24	1.24	1.24	1.28
34. FOOTWEAR & OTHER LEATHER PROD.	16.15	16.27	16.42	16.46	16.41	16.37	0.28



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
55. CLERICAL WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
35. GLASS & GLASS PRODUCTS	13.34	13.79	14.24	14.55	14.69	14.74	2.01
36. STONE & CLAY PRODUCTS	38.84	39.83	40.71	41.92	42.33	42.01	1.58
37. PRIMARY FERROUS METALS	45.84	47.17	48.58	49.11	49.23	48.96	1.32
38. NONFERROUS METALS	33.66	34.98	36.48	37.62	38.30	38.92	2.94
39. METAL CONTAINERS	4.54	4.48	4.49	4.57	4.60	4.62	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	62.07	62.44	64.20	66.58	68.22	69.35	2.25
41. SCREW MACHINE PROD.&STAMPINGS	24.99	26.32	27.22	27.73	27.92	28.08	2.36
42. OTHER FAB. METAL PRODUCTS	39.46	40.75	42.60	44.00	45.04	46.12	3.17
43. ENGINES & TURBINES	11.62	12.02	12.49	12.65	12.74	12.82	1.98
44. FARM & GARDEN MACHINERY	13.20	13.60	14.35	14.60	14.81	15.02	2.63
45. CONSTR. & MINING MACHINERY	32.93	34.83	36.67	37.98	39.02	39.47	3.69
46. MATERIALS HANDLING MACH. & EQ.	11.77	12.15	12.90	13.43	13.80	14.10	3.67
47. METALWORKING MACH. & EQ.	35.85	37.37	39.67	41.36	42.63	43.51	3.95
48. SPECIAL INDUSTRY MACHINERY	22.94	23.47	24.69	25.84	26.53	27.13	3.42
49. GENERAL INDUSTRY MACHINERY	39.98	41.05	43.06	44.29	45.11	45.91	2.81
50. MISC. NONELECTRICAL MACH.	18.70	19.26	20.14	20.67	20.92	21.23	2.57
51. OFFICE, COMPUTING & ACCT. MACH.	63.44	66.14	69.10	70.53	71.68	73.45	2.97
52. SERVICE INDUSTRY MACHINES	20.46	21.31	22.37	22.78	22.88	22.93	2.31
53. ELECTRICAL MACHINERY	35.43	36.10	37.79	38.71	39.19	39.52	2.21
54. HOUSEHOLD APPLIANCES	11.52	11.86	12.20	12.64	12.94	13.14	2.67
55. ELECTRIC LIGHTING & WIRING EQ.	21.60	21.79	22.42	22.99	23.37	23.69	1.86
56. RADIO, TV, & COMMUNICATION EQ.	87.95	90.15	93.12	94.88	95.88	97.61	2.11
57. ELECTRONIC COMPONENTS & ACCESS.	46.01	48.07	50.56	52.69	54.29	55.52	3.83
58. MISC. ELECTRICAL MACH. & EQ.	15.66	16.24	16.92	17.15	17.40	17.57	2.34
59. MOTOR VEHICLES & EQUIPMENT	53.43	55.93	57.89	58.89	59.60	60.00	2.35
60. AIRCRAFT & PARTS	74.23	77.33	79.58	82.22	82.55	82.63	2.17
61. OTHER TRANSPORTATION EQ.	20.04	20.65	21.40	21.89	21.96	22.17	2.04
62. INSTRUMENTS & SUPPLIES	70.81	72.19	75.19	78.27	80.48	81.96	2.97
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	29.14	29.59	30.89	32.29	33.40	34.29	3.31
64. MISC. MANUFACTURING	49.50	50.32	51.99	53.52	54.42	54.87	2.08
65. TRANSPORTATION & WAREHOUSING	1,135.81	1,164.47	1,191.31	1,223.47	1,234.12	1,237.13	1.72
66. COMMUNICATION EXC. RADIO & TV	551.21	555.72	569.45	575.66	589.29	594.90	1.54
67. RADIO & TV BROADCASTING	33.08	34.25	35.31	35.93	36.34	36.75	2.12
68. UTILITIES	206.74	207.38	207.87	208.26	208.86	209.12	0.23
69. WHOLESALE & RETAIL TRADE	4,620.60	4,769.65	4,918.88	5,045.58	5,145.20	5,248.87	2.58
70. FINANCE & INSURANCE	2,516.00	2,561.46	2,617.06	2,687.20	2,761.51	2,832.39	2.40
71. REAL ESTATE & RENTAL	104.20	106.92	110.05	113.02	115.43	117.45	2.42
72. PERSONAL SERVICES EXC. AUTO.	494.65	500.50	508.63	516.91	525.25	532.39	1.48
73. BUSINESS SERVICES	719.81	748.66	780.39	816.84	848.65	875.24	3.99

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
55. CLERICAL WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
74. EATING & DRINKING PLACES	278.59	287.72	296.41	302.68	308.30	312.71	2.34
75. AUTOMOBILE REPAIR & SERVICE	87.90	89.58	90.36	90.77	91.29	92.04	0.92
76. AMUSEMENTS	130.23	131.95	135.53	138.64	141.99	145.04	2.18
77. MISC. SERVICES	3,896.86	3,944.18	4,002.52	4,089.37	4,190.63	4,304.19	2.01
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	358.48	365.53	373.85	382.60	390.40	397.77	2.10
82. GOVERNMENT INDUSTRY	2,077.94	2,068.05	2,082.05	2,111.65	2,141.17	2,168.53	0.86
TOTAL, ALL INDUSTRIES	19,741.72	20,128.22	20,584.40	21,063.70	21,490.25	21,893.76	2.09

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
56. COMPUTER&PERIPHERAL EQUIP. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	10.52
8. CRUDE PETROLEUM & N. GAS	0.12	0.13	0.14	0.15	0.16	0.16	6.24
11. NEW CONSTRUCTION	0.06	0.06	0.07	0.07	0.08	0.08	8.35
13. ORDNANCE & ACCESSORIES	0.47	0.54	0.59	0.63	0.67	0.70	7.98
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.32
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	4.59
18. APPAREL	0.01	0.01	0.01	0.01	0.01	0.01	5.97
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.69
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.36
24. PAPER & ALLIED PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.03	6.74
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.79
26. PRINTING & PUBLISHING	0.08	0.08	0.09	0.10	0.10	0.10	6.35
27. CHEMICALS & PRODUCTS	0.06	0.06	0.07	0.07	0.08	0.08	7.61
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.02	0.02	0.02	8.71
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	8.22
31. PET REFINING & REL. PROD.	0.03	0.04	0.04	0.04	0.04	0.04	5.41
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.04	0.04	0.05	0.05	0.06	10.31
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.97
36. STONE & CLAY PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	8.13
37. PRIMARY FERROUS METALS	0.08	0.09	0.10	0.11	0.11	0.12	7.58
38. NONFERROUS METALS	0.05	0.06	0.06	0.07	0.08	0.08	9.68
40. FAB. STRUCTURAL METAL PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	7.88
41. SCREW MACHINE PROD. & STAMPINGS	0.03	0.04	0.04	0.04	0.05	0.05	7.71
42. OTHER FAB. METAL PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.06	9.93
43. ENGINES & TURBINES	0.02	0.02	0.02	0.02	0.03	0.03	7.74
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.11
47. METALWORKING MACH. & EQ.	0.04	0.04	0.05	0.05	0.05	0.06	9.37
49. GENERAL INDUSTRY MACHINERY	0.04	0.04	0.04	0.05	0.05	0.05	7.51
50. MISC. NONELECTRICAL MACH.	0.01	0.02	0.02	0.02	0.02	0.02	7.57
51. OFFICE, COMPUTING & ACCT. MACH.	0.13	0.15	0.17	0.18	0.19	0.20	9.14
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.01	13.39
53. ELECTRICAL MACHINERY	0.03	0.04	0.04	0.05	0.05	0.05	9.06
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.03	0.04	0.04	0.04	8.27
56. RADIO, TV, & COMMUNICATION EQ.	1.08	1.25	1.37	1.49	1.57	1.61	8.18
57. ELECTRONIC COMPONENTS & ACCESS.	0.24	0.29	0.32	0.36	0.40	0.42	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.55

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
56. COMPUTER&PERIPHERAL EQUIP. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
59. MOTOR VEHICLES & EQUIPMENT	0.03	0.03	0.04	0.04	0.05	0.06	17.13
60. AIRCRAFT & PARTS	0.84	0.95	1.05	1.16	1.24	1.27	8.60
61. OTHER TRANSPORTATION EQ.	0.09	0.09	0.10	0.10	0.10	0.10	3.47
62. INSTRUMENTS & SUPPLIES	0.15	0.17	0.19	0.20	0.22	0.23	8.23
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.03	0.04	0.04	0.04	0.04	8.49
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.47
65. TRANSPORTATION & WAREHOUSING	0.29	0.30	0.32	0.34	0.35	0.36	4.70
66. COMMUNICATION EXC. RADIO & TV	0.16	0.17	0.18	0.19	0.20	0.21	5.40
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.19
68. UTILITIES	0.07	0.07	0.08	0.08	0.09	0.09	6.03
69. WHOLESALE & RETAIL TRADE	0.10	0.11	0.12	0.13	0.14	0.15	9.19
70. FINANCE & INSURANCE	0.38	0.44	0.50	0.56	0.63	0.67	12.29
71. REAL ESTATE & RENTAL	0.01	0.02	0.02	0.02	0.02	0.02	9.15
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.02	0.02	0.02	0.02	0.02	8.16
73. BUSINESS SERVICES	1.84	2.24	2.63	3.08	3.48	3.80	15.60
74. EATING & DRINKING PLACES	0.01	0.01	0.01	0.01	0.01	0.01	9.73
77. MISC. SERVICES	0.37	0.41	0.45	0.50	0.55	0.59	9.56
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.08	0.09	0.10	0.10	0.11	0.12	6.84
82. GOVERNMENT INDUSTRY	6.95	7.21	7.74	8.36	8.90	9.35	6.13
TOTAL, ALL INDUSTRIES	14.36	15.72	17.23	18.95	20.42	21.51	8.42
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.12	0.12	0.13	0.13	0.13	0.13	1.98
8. CRUDE PETROLEUM & N. GAS	1.63	1.67	1.70	1.70	1.70	1.75	1.36
11. NEW CONSTRUCTION	1.49	1.52	1.54	1.59	1.62	1.64	1.94
13. ORDNANCE & ACCESSORIES	0.78	0.80	0.82	0.84	0.85	0.86	1.87
14. FOOD & KINDRED PRODUCTS	1.54	1.56	1.57	1.57	1.56	1.55	0.19
16. FABRIC, YARN & THREAD MILLS	0.45	0.46	0.47	0.48	0.48	0.48	1.22
18. APPAREL	1.59	1.61	1.64	1.67	1.67	1.67	0.93
19. MISC. FABRICATED TEXTILE PROD.	0.28	0.29	0.30	0.30	0.31	0.31	1.87
20. LUMBER & WOOD PRODUCTS	0.38	0.41	0.43	0.45	0.45	0.45	3.52
24. PAPER & ALLIED PRODUCTS	0.98	1.01	1.03	1.03	1.03	1.03	0.90
25. PAPERBOARD CONTAINERS & BOXES	0.40	0.41	0.42	0.43	0.43	0.43	1.72
26. PRINTING & PUBLISHING	4.82	4.85	4.90	4.95	4.98	5.00	0.72
27. CHEMICALS & PRODUCTS	1.20	1.23	1.25	1.26	1.27	1.27	1.09
28. PLASTICS & SYNTHETIC MATLS.	0.49	0.51	0.53	0.54	0.55	0.55	2.31
30. PAINTS & ALLIED PRODUCTS	0.25	0.26	0.27	0.28	0.28	0.29	3.00
31. PET REFINING & REL. PROD.	0.63	0.63	0.63	0.64	0.64	0.64	0.46

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
56. COMPUTER&PERIPHERAL EQUIP. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
32. RUBBER & MISC. PLASTICS PROD.	1.25	1.29	1.35	1.39	1.43	1.44	2.89
35. GLASS & GLASS PRODUCTS	0.27	0.28	0.29	0.30	0.30	0.30	2.14
36. STONE & CLAY PRODUCTS	0.66	0.67	0.69	0.70	0.70	0.69	0.91
37. PRIMARY FERROUS METALS	1.14	1.17	1.21	1.22	1.22	1.21	1.22
38. NONFERROUS METALS	0.60	0.63	0.66	0.68	0.69	0.70	3.07
40. FAB. STRUCTURAL METAL PRODUCTS	1.36	1.36	1.40	1.45	1.49	1.51	2.13
41. SCREW MACHINE PROD.&STAMPINGS	0.54	0.58	0.58	0.59	0.60	0.60	2.18
42. OTHER FAB. METAL PRODUCTS	0.77	0.80	0.83	0.86	0.88	0.90	3.21
43. ENGINES & TURBINES	0.23	0.23	0.24	0.24	0.25	0.25	1.80
45. CONSTR. & MINING MACHINERY	0.58	0.61	0.64	0.67	0.68	0.69	3.63
46. MATERIALS HANDLING MACH. & EQ.	0.21	0.21	0.23	0.24	0.24	0.25	3.61
47. METALWORKING MACH. & EQ.	0.70	0.73	0.77	0.80	0.82	0.84	3.77
49. GENERAL INDUSTRY MACHINERY	0.82	0.84	0.88	0.90	0.92	0.93	2.62
50. MISC. NONELECTRICAL MACH.	0.13	0.13	0.14	0.14	0.14	0.14	2.26
51. OFFICE, COMPUTING & ACCT. MACH.	3.43	3.63	3.86	3.99	4.11	4.26	4.47
52. SERVICE INDUSTRY MACHINES	0.35	0.37	0.38	0.39	0.39	0.39	2.13
53. ELECTRICAL MACHINERY	0.68	0.69	0.72	0.74	0.75	0.75	2.01
55. ELECTRIC LIGHTING & WIRING EQ.	0.55	0.56	0.57	0.59	0.60	0.60	1.72
56. RADIO, TV, & COMMUNICATION EQ.	2.57	2.63	2.71	2.76	2.79	2.84	2.02
57. ELECTRONIC COMPONENTS & ACCESS.	1.11	1.15	1.21	1.26	1.30	1.32	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.32	0.33	0.34	0.34	0.35	0.35	2.10
59. MOTOR VEHICLES & EQUIPMENT	1.37	1.43	1.48	1.50	1.52	1.53	2.22
60. AIRCRAFT & PARTS	1.68	1.75	1.80	1.86	1.86	1.86	2.00
61. OTHER TRANSPORTATION EQ.	0.30	0.31	0.32	0.33	0.33	0.34	2.06
62. INSTRUMENTS & SUPPLIES	1.30	1.33	1.38	1.43	1.47	1.50	2.77
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.69	0.69	0.72	0.76	0.78	0.80	3.13
64. MISC. MANUFACTURING	0.91	0.93	0.96	1.00	1.02	1.03	2.42
65. TRANSPORTATION & WAREHOUSING	6.74	6.92	7.08	7.28	7.34	7.36	1.77
66. COMMUNICATION EXC. RADIO & TV	6.46	6.52	6.70	6.78	6.95	7.03	1.69
67. RADIO & TV BROADCASTING	0.41	0.43	0.44	0.44	0.45	0.45	1.75
68. UTILITIES	3.10	3.11	3.11	3.11	3.12	3.12	0.08
69. WHOLESALE & RETAIL TRADE	15.90	16.35	16.79	17.15	17.42	17.71	2.17
70. FINANCE & INSURANCE	43.84	45.95	48.24	50.78	53.42	56.00	5.02
71. REAL ESTATE & RENTAL	0.49	0.51	0.52	0.54	0.55	0.56	2.73
72. PERSONAL SERVICES EXC. AUTO.	0.77	0.78	0.79	0.80	0.82	0.83	1.64
73. BUSINESS SERVICES	37.98	42.34	46.90	51.79	56.44	60.75	9.88
74. EATING & DRINKING PLACES	0.51	0.52	0.53	0.54	0.54	0.54	1.04
77. MISC. SERVICES	58.02	62.51	67.13	72.23	77.62	83.30	7.50
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.55	0.59	0.62	0.66	0.70	0.73	5.87

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
56. COMPUTER&PERIPHERAL EQUIP. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	28.63	30.41	32.56	35.07	37.61	39.93	6.88
TOTAL, ALL INDUSTRIES	250.22	264.95	280.88	297.75	314.21	330.10	5.70

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
87. COMPUTER OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.09	0.10	0.11	0.12	0.13	0.13	8.89
11. NEW CONSTRUCTION	0.05	0.08	0.06	0.07	0.07	0.07	8.33
13. ORDNANCE & ACCESSORIES	0.39	0.44	0.48	0.52	0.54	0.57	8.00
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.33
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.68
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.37
24. PAPER & ALLIED PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	8.74
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.78
26. PRINTING & PUBLISHING	0.06	0.06	0.07	0.07	0.07	0.08	8.30
27. CHEMICALS & PRODUCTS	0.05	0.05	0.06	0.06	0.07	0.07	7.49
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.70
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	8.18
31. PET REFINING & REL. PROD.	0.02	0.03	0.03	0.03	0.03	0.03	8.42
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.03	0.03	0.04	0.04	0.04	10.33
36. STONE & CLAY PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	8.14
37. PRIMARY FERROUS METALS	0.06	0.07	0.08	0.08	0.09	0.09	7.87
38. NONFERROUS METALS	0.04	0.05	0.05	0.06	0.06	0.06	9.65
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.05	0.06	0.06	0.07	0.07	7.88
41. SCREW MACHINE PROD. & STAMPINGS	0.03	0.03	0.03	0.03	0.04	0.04	7.71
42. OTHER FAB. METAL PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	9.92
43. ENGINES & TURBINES	0.01	0.01	0.02	0.02	0.02	0.02	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.02	0.02	9.11
47. METALWORKING MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.37
49. GENERAL INDUSTRY MACHINERY	0.03	0.03	0.04	0.04	0.04	0.04	7.81
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.02	0.02	0.02	0.02	7.89
51. OFFICE, COMPUTING & ACCT. MACH.	0.11	0.13	0.15	0.16	0.17	0.18	9.37
53. ELECTRICAL MACHINERY	0.03	0.03	0.04	0.04	0.04	0.04	9.08
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.03	0.03	0.03	0.03	0.04	8.26
56. RADIO, TV, & COMMUNICATION EQ.	0.82	0.94	1.04	1.13	1.19	1.22	8.18
57. ELECTRONIC COMPONENTS & ACCESS.	0.20	0.24	0.27	0.30	0.33	0.34	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.02	0.03	0.03	0.04	0.04	0.05	17.13
60. AIRCRAFT & PARTS	0.48	0.53	0.58	0.64	0.68	0.70	8.60
61. OTHER TRANSPORTATION EQ.	0.06	0.08	0.07	0.07	0.07	0.07	3.47
62. INSTRUMENTS & SUPPLIES	0.12	0.14	0.15	0.17	0.18	0.18	8.27
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.03	0.03	0.04	0.04	0.04	8.50

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
57. COMPUTER OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	89	84	85	86	87	82 TO 87
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.36
65. TRANSPORTATION & WAREHOUSING	0.18	0.20	0.21	0.22	0.23	0.24	5.26
66. COMMUNICATION EXC. RADIO & TV	0.13	0.14	0.15	0.16	0.17	0.17	5.39
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.19
68. UTILITIES	0.05	0.05	0.06	0.06	0.06	0.07	6.04
69. WHOLESALE & RETAIL TRADE	0.07	0.08	0.09	0.10	0.11	0.12	9.03
70. FINANCE & INSURANCE	0.26	0.30	0.34	0.39	0.44	0.47	12.62
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	9.15
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.02	0.02	8.07
73. BUSINESS SERVICES	1.72	2.10	2.47	2.90	3.29	3.59	15.84
74. EATING & DRINKING PLACES	0.01	0.01	0.01	0.01	0.01	0.01	9.75
77. MISC. SERVICES	0.27	0.29	0.33	0.36	0.40	0.43	9.93
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.08	0.08	0.09	0.10	0.10	0.11	6.84
82. GOVERNMENT INDUSTRY	6.95	7.21	7.74	8.36	8.90	9.35	6.13
TOTAL, ALL INDUSTRIES	12.78	13.94	15.28	16.81	18.13	19.14	8.42
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	1.28	1.32	1.35	1.35	1.36	1.40	1.79
11. NEW CONSTRUCTION	1.33	1.36	1.38	1.42	1.45	1.47	1.92
13. ORDNANCE & ACCESSORIES	0.64	0.65	0.66	0.68	0.69	0.70	1.89
14. FOOD & KINDRED PRODUCTS	1.20	1.22	1.23	1.23	1.22	1.21	0.20
19. MISC. FABRICATED TEXTILE PROD.	0.22	0.22	0.23	0.24	0.24	0.24	1.86
20. LUMBER & WOOD PRODUCTS	0.29	0.32	0.33	0.35	0.35	0.35	3.53
24. PAPER & ALLIED PRODUCTS	0.77	0.79	0.80	0.80	0.80	0.80	0.90
25. PAPERBOARD CONTAINERS & BOXES	0.31	0.32	0.33	0.33	0.34	0.34	1.70
26. PRINTING & PUBLISHING	3.60	3.62	3.65	3.68	3.70	3.72	0.67
27. CHEMICALS & PRODUCTS	1.01	1.03	1.04	1.05	1.06	1.06	0.98
28. PLASTICS & SYNTHETIC MATLS.	0.39	0.41	0.42	0.43	0.44	0.44	2.30
30. PAINTS & ALLIED PRODUCTS	0.21	0.22	0.23	0.24	0.24	0.24	2.96
31. PET REFINING & REL. PROD.	0.45	0.45	0.45	0.46	0.46	0.46	0.47
32. RUBBER & MISC. PLASTICS PROD.	0.97	1.01	1.05	1.08	1.11	1.12	2.90
36. STONE & CLAY PRODUCTS	0.52	0.53	0.53	0.55	0.55	0.54	0.92
37. PRIMARY FERROUS METALS	0.89	0.91	0.94	0.95	0.95	0.94	1.22
38. NONFERROUS METALS	0.47	0.49	0.51	0.53	0.54	0.55	3.04
40. FAB. STRUCTURAL METAL PRODUCTS	1.06	1.06	1.09	1.13	1.16	1.17	2.13
41. SCREW MACHINE PROD. & STAMPINGS	0.42	0.44	0.45	0.46	0.46	0.47	2.18
42. OTHER FAB. METAL PRODUCTS	0.60	0.62	0.65	0.67	0.68	0.70	3.21
43. ENGINES & TURBINES	0.15	0.15	0.16	0.16	0.16	0.16	1.77



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
57. COMPUTER OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
45. CONSTR. & MINING MACHINERY	0.51	0.54	0.56	0.58	0.60	0.61	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.18	0.19	0.20	0.21	0.21	0.22	3.62
47. METALWORKING MACH. & EQ.	0.60	0.62	0.66	0.69	0.71	0.72	3.77
49. GENERAL INDUSTRY MACHINERY	0.67	0.69	0.72	0.74	0.75	0.76	2.61
50. MISC. NONELECTRICAL MACH.	0.11	0.12	0.12	0.12	0.12	0.13	2.28
51. OFFICE, COMPUTING & ACCT. MACH.	3.04	3.23	3.43	3.56	3.67	3.82	4.89
53. ELECTRICAL MACHINERY	0.57	0.58	0.61	0.62	0.63	0.63	2.03
55. ELECTRIC LIGHTING & WIRING EQ.	0.49	0.50	0.51	0.52	0.53	0.54	1.71
56. RADIO, TV, & COMMUNICATION EQ.	1.94	1.99	2.05	2.09	2.11	2.15	2.03
57. ELECTRONIC COMPONENTS & ACCESS.	0.91	0.95	1.00	1.04	1.07	1.09	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.27	0.28	0.29	0.29	0.30	0.30	2.11
59. MOTOR VEHICLES & EQUIPMENT	1.14	1.19	1.24	1.25	1.27	1.28	2.22
60. AIRCRAFT & PARTS	0.93	0.97	0.99	1.03	1.03	1.03	2.00
61. OTHER TRANSPORTATION EQ.	0.21	0.22	0.23	0.23	0.23	0.23	2.08
62. INSTRUMENTS & SUPPLIES	1.08	1.08	1.13	1.17	1.20	1.22	2.81
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.61	0.62	0.65	0.68	0.70	0.72	3.14
64. MISC. MANUFACTURING	0.74	0.75	0.78	0.80	0.82	0.83	2.31
65. TRANSPORTATION & WAREHOUSING	4.34	4.47	4.60	4.75	4.82	4.86	2.31
66. COMMUNICATION EXC. RADIO & TV	5.31	5.36	5.50	5.57	5.71	5.77	1.66
67. RADIO & TV BROADCASTING	0.33	0.34	0.35	0.35	0.35	0.36	1.76
68. UTILITIES	2.28	2.27	2.27	2.27	2.27	2.27	0.09
69. WHOLESALE & RETAIL TRADE	12.22	12.54	12.86	13.12	13.31	13.51	2.03
70. FINANCE & INSURANCE	30.17	31.80	33.55	35.49	37.49	39.45	5.51
71. REAL ESTATE & RENTAL	0.33	0.34	0.36	0.37	0.38	0.38	2.73
72. PERSONAL SERVICES EXC. AUTO.	0.62	0.63	0.64	0.65	0.66	0.67	1.56
73. BUSINESS SERVICES	35.51	39.71	44.10	48.80	53.26	57.41	10.09
74. EATING & DRINKING PLACES	0.46	0.47	0.48	0.48	0.49	0.49	1.06
77. MISC. SERVICES	41.57	44.99	48.50	52.36	56.43	60.70	7.87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.43	0.46	0.49	0.52	0.55	0.59	6.21
82. GOVERNMENT INDUSTRY	28.63	30.41	32.56	35.07	37.61	39.93	6.88
TOTAL, ALL INDUSTRIES	199.30	211.89	225.54	239.97	254.06	267.59	6.07

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
58. PERIPHERAL EDP EQUIP. OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.03	0.03	0.03	0.03	0.03	0.03	4.52
11. NEW CONSTRUCTION	0.01	0.01	0.01	0.01	0.01	0.01	8.55
13. ORDNANCE & ACCESSORIES	0.09	0.10	0.11	0.12	0.12	0.13	7.93
26. PRINTING & PUBLISHING	0.02	0.02	0.02	0.02	0.03	0.03	6.52
27. CHEMICALS & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.22
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	5.39
32. RUBBER & MISC. PLASTICS PROD.	0.01	0.01	0.01	0.01	0.01	0.01	10.25
37. PRIMARY FERROUS METALS	0.02	0.02	0.02	0.02	0.02	0.03	7.59
38. NONFERROUS METALS	0.01	0.01	0.01	0.02	0.02	0.02	9.80
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	7.86
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.01	7.70
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.94
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.81
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.52
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.02	0.02	0.02	0.02	0.02	7.31
56. RADIO, TV, & COMMUNICATION EQ.	0.26	0.30	0.33	0.36	0.38	0.39	8.15
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.05	0.06	0.06	0.07	0.07	11.36
60. AIRCRAFT & PARTS	0.38	0.42	0.47	0.52	0.55	0.57	8.59
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.03	3.48
62. INSTRUMENTS & SUPPLIES	0.03	0.03	0.03	0.04	0.04	0.04	8.04
65. TRANSPORTATION & WAREHOUSING	0.10	0.11	0.11	0.12	0.12	0.12	3.67
66. COMMUNICATION EXC. RADIO & TV	0.03	0.03	0.03	0.03	0.04	0.04	5.48
68. UTILITIES	0.02	0.02	0.02	0.02	0.02	0.02	6.00
69. WHOLESALE & RETAIL TRADE	0.02	0.03	0.03	0.03	0.03	0.04	9.70
70. FINANCE & INSURANCE	0.12	0.13	0.15	0.17	0.19	0.20	11.09
73. BUSINESS SERVICES	0.12	0.14	0.16	0.18	0.20	0.21	11.88
77. MISC. SERVICES	0.11	0.11	0.13	0.14	0.15	0.16	8.59
TOTAL, ALL INDUSTRIES	1.58	1.78	1.95	2.13	2.28	2.37	8.45
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.35	0.35	0.35	0.34	0.34	0.34	-0.28
11. NEW CONSTRUCTION	0.16	0.16	0.16	0.17	0.17	0.17	2.13
13. ORDNANCE & ACCESSORIES	0.15	0.15	0.15	0.18	0.16	0.16	1.82
26. PRINTING & PUBLISHING	1.23	1.24	1.25	1.27	1.28	1.28	0.88
27. CHEMICALS & PRODUCTS	0.19	0.20	0.20	0.21	0.21	0.21	1.67
31. PET REFINING & REL. PROD.	0.18	0.18	0.18	0.18	0.18	0.18	0.44

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
58. PERIPHERAL EDP EQUIP. OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
32. RUBBER & MISC. PLASTICS PROO.	0.28	0.29	0.30	0.31	0.31	0.32	2.83
37. PRIMARY FERROUS METALS	0.25	0.26	0.27	0.27	0.27	0.27	1.24
38. NONFERROUS METALS	0.13	0.14	0.14	0.15	0.15	0.15	3.18
40. FAB. STRUCTURAL METAL PRODUCTS	0.30	0.30	0.31	0.32	0.33	0.33	2.11
41. SCREW MACHINE PROD.&STAMPINGS	0.12	0.13	0.13	0.13	0.13	0.13	2.17
42. OTHER FAB. METAL PRODUCTS	0.17	0.18	0.18	0.19	0.20	0.20	3.22
43. ENGINES & TURBINES	0.08	0.08	0.08	0.09	0.09	0.09	1.87
49. GENERAL INDUSTRY MACHINERY	0.15	0.15	0.16	0.16	0.16	0.17	2.63
51. OFFICE, COMPUTING & ACCT. MACH.	0.39	0.41	0.42	0.43	0.44	0.45	2.71
56. RADIO, TV, & COMMUNICATION EQ.	0.62	0.64	0.66	0.67	0.68	0.69	2.00
57. ELECTRONIC COMPONENTS & ACCESS.	0.19	0.20	0.21	0.22	0.23	0.23	3.64
60. AIRCRAFT & PARTS	0.75	0.78	0.80	0.83	0.83	0.83	1.99
61. OTHER TRANSPORTATION EQ.	0.09	0.10	0.10	0.10	0.10	0.10	2.07
62. INSTRUMENTS & SUPPLIES	0.24	0.24	0.25	0.26	0.27	0.27	2.59
65. TRANSPORTATION & WAREHOUSING	2.41	2.45	2.48	2.52	2.52	2.50	0.77
66. COMMUNICATION EXC. RADIO & TV	1.15	1.16	1.19	1.21	1.24	1.26	1.74
68. UTILITIES	0.84	0.84	0.84	0.84	0.84	0.84	0.05
69. WHOLESALE & RETAIL TRADE	3.68	3.80	3.92	4.03	4.11	4.19	2.65
70. FINANCE & INSURANCE	13.67	14.15	14.68	15.30	15.94	16.56	3.90
73. BUSINESS SERVICES	2.46	2.62	2.80	3.00	3.18	3.34	6.32
77. MISC. SERVICES	16.45	17.52	18.63	19.88	21.20	22.59	6.55
TOTAL, ALL INDUSTRIES	50.92	53.05	55.34	57.77	60.15	62.50	4.18

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
59. SECRETARIES&OFFICE MACH. OPS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.04	0.04	0.04	0.04	0.04	0.04	4.10
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	5.67
4. AGR., FORESTRY, & FISHERY SERV.	0.09	0.10	0.11	0.12	0.13	0.14	8.17
5. IRON ORE MINING	0.02	0.03	0.03	0.03	0.03	0.04	8.39
6. NONFERROUS METAL MINING	0.08	0.09	0.10	0.11	0.12	0.12	10.46
7. COAL MINING	0.08	0.10	0.11	0.12	0.13	0.14	10.20
8. CRUDE PETROLEUM & N. GAS	1.10	1.18	1.23	1.31	1.39	1.41	5.20
9. STONE&CLAY MINING & QUARRYING	0.04	0.05	0.05	0.06	0.06	0.07	10.11
10. CHEM&FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.89
11. NEW CONSTRUCTION	3.30	3.80	4.15	4.65	5.08	5.40	10.34
13. ORDNANCE & ACCESSORIES	6.11	6.97	7.66	8.34	8.87	9.27	8.71
14. FOOD & KINDRED PRODUCTS	0.18	0.20	0.21	0.23	0.24	0.25	6.40
16. FABRIC, YARN & THREAD MILLS	0.08	0.08	0.08	0.07	0.07	0.07	5.10
17. MISC. TEXTILE GOODS	0.03	0.04	0.04	0.04	0.04	0.05	7.41
18. APPAREL	0.04	0.05	0.05	0.05	0.06	0.06	6.56
19. MISC. FABRICATED TEXTILE PROD.	0.08	0.09	0.09	0.10	0.11	0.11	5.59
20. LUMBER & WOOD PRODUCTS	0.13	0.15	0.16	0.18	0.20	0.21	10.51
21. WOOD CONTAINERS	0.03	0.03	0.03	0.04	0.04	0.04	9.78
22. HOUSEHOLD FURNITURE	0.03	0.03	0.03	0.03	0.04	0.04	4.46
23. OTHER FURNITURE & FIXTURES	0.06	0.06	0.06	0.07	0.07	0.07	4.94
24. PAPER & ALLIED PRODUCTS	0.22	0.24	0.26	0.28	0.30	0.31	7.33
25. PAPERBOARD CONTAINERS & BOXES	0.07	0.08	0.09	0.10	0.11	0.11	9.64
26. PRINTING & PUBLISHING	1.06	1.15	1.24	1.35	1.42	1.47	6.82
27. CHEMICALS & PRODUCTS	1.06	1.16	1.27	1.38	1.49	1.57	8.12
28. PLASTICS & SYNTHETIC MATLS.	0.15	0.16	0.18	0.20	0.22	0.23	9.42
29. DRUGS, CLEANING & TOILET PREP.	0.08	0.09	0.09	0.10	0.10	0.11	5.04
30. PAINTS & ALLIED PRODUCTS	0.12	0.14	0.15	0.16	0.17	0.18	8.53
31. PET REFINING & REL. PROD.	0.40	0.42	0.45	0.48	0.51	0.52	5.30
32. RUBBER & MISC. PLASTICS PROD.	0.37	0.42	0.47	0.53	0.58	0.61	10.79
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.01	0.01	5.27
35. GLASS & GLASS PRODUCTS	0.07	0.08	0.09	0.10	0.10	0.11	10.47
36. STONE & CLAY PRODUCTS	0.26	0.30	0.33	0.36	0.39	0.41	9.36
37. PRIMARY FERROUS METALS	0.63	0.70	0.76	0.83	0.89	0.93	8.18
38. NONFERROUS METALS	0.69	0.79	0.88	0.98	1.06	1.12	10.20
39. METAL CONTAINERS	0.01	0.02	0.02	0.02	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.73	0.83	0.89	0.97	1.04	1.10	8.62

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
59. SECRETARIES&OFFICE MACH. OPS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROD.&STAMPINGS	0.31	0.35	0.38	0.41	0.44	0.46	8.61
42. OTHER FAB. METAL PRODUCTS	0.42	0.49	0.54	0.60	0.65	0.69	10.20
43. ENGINES & TURBINES	0.29	0.33	0.36	0.38	0.41	0.43	8.44
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	8.06
45. CONSTR. & MINING MACHINERY	0.10	0.11	0.12	0.13	0.14	0.14	7.42
46. MATERIALS HANDLING MACH. & EQ.	0.17	0.20	0.22	0.24	0.26	0.27	9.30
47. METALWORKING MACH. & EQ.	0.50	0.57	0.64	0.71	0.77	0.80	10.10
48. SPECIAL INDUSTRY MACHINERY	0.04	0.05	0.06	0.07	0.08	0.08	12.86
49. GENERAL INDUSTRY MACHINERY	0.45	0.51	0.55	0.59	0.63	0.66	7.82
50. MISC. NONELECTRICAL MACH.	0.58	0.64	0.71	0.79	0.84	0.88	8.83
51. OFFICE, COMPUTING & ACCT. MACH.	0.78	0.90	0.98	1.06	1.10	1.14	7.82
52. SERVICE INDUSTRY MACHINES	0.09	0.11	0.12	0.14	0.16	0.18	14.27
53. ELECTRICAL MACHINERY	0.45	0.52	0.57	0.63	0.68	0.71	9.44
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	10.27
55. ELECTRIC LIGHTING & WIRING EQ.	0.22	0.25	0.27	0.30	0.32	0.34	8.38
56. RADIO, TV, & COMMUNICATION EQ.	11.67	13.52	14.97	16.36	17.34	17.85	8.88
57. ELECTRONIC COMPONENTS & ACCESS.	2.65	3.17	3.60	4.05	4.45	4.69	12.11
58. MISC. ELECTRICAL MACH. & EQ.	0.11	0.13	0.14	0.15	0.17	0.18	10.19
59. MOTOR VEHICLES & EQUIPMENT	0.21	0.25	0.28	0.34	0.40	0.47	17.60
60. AIRCRAFT & PARTS	10.84	12.34	13.67	15.17	16.32	16.84	9.21
61. OTHER TRANSPORTATION EQ.	1.32	1.40	1.45	1.48	1.53	1.58	3.69
62. INSTRUMENTS & SUPPLIES	2.49	2.82	3.10	3.41	3.65	3.80	8.85
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.36	0.40	0.43	0.48	0.52	0.55	9.10
64. MISC. MANUFACTURING	0.11	0.12	0.13	0.13	0.14	0.15	5.99
65. TRANSPORTATION & WAREHOUSING	3.77	4.04	4.27	4.58	4.82	4.97	5.68
66. COMMUNICATION EXC. RADIO & TV	1.18	1.25	1.33	1.43	1.51	1.55	5.60
67. RADIO & TV BROADCASTING	0.25	0.28	0.31	0.34	0.37	0.39	9.21
68. UTILITIES	0.84	0.92	0.99	1.07	1.13	1.15	6.56
69. WHOLESALE & RETAIL TRADE	3.03	3.42	3.77	4.19	4.54	4.78	9.57
70. FINANCE & INSURANCE	4.39	4.98	5.50	6.11	6.63	6.96	9.64
71. REAL ESTATE & RENTAL	0.93	1.06	1.19	1.32	1.44	1.52	10.29
72. PERSONAL SERVICES EXC. AUTO.	0.89	1.03	1.14	1.27	1.38	1.47	10.52
73. BUSINESS SERVICES	12.93	14.63	16.17	17.96	19.38	20.27	9.41
74. EATING & DRINKING PLACES	0.07	0.08	0.09	0.10	0.10	0.11	11.05
75. AUTOMOBILE REPAIR & SERVICE	0.14	0.16	0.17	0.19	0.20	0.21	8.08
76. AMUSEMENTS	0.14	0.16	0.18	0.19	0.21	0.22	9.07
77. MISC. SERVICES	10.24	10.50	10.93	11.58	12.12	12.41	3.92
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.93	5.07	5.29	5.55	5.72	5.81	3.34
82. GOVERNMENT INDUSTRY	76.93	75.28	76.59	78.56	79.72	80.12	0.82

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
§9. SECRETARIES&OFFICE MACH. OPS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	62	63	64	65	66	67	AVG. ANN % GROWTH 62 TO 67
TOTAL, ALL INDUSTRIES	172.31	181.74	192.64	205.56	215.47	221.27	5.13
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	3.26	3.31	3.26	3.20	3.16	3.15	-0.81
2. OTHER AGRICULTURAL PRODUCTS	24.44	24.86	25.30	25.54	25.61	26.10	1.32
3. FORESTRY & FISHERY PRODUCTS	0.49	0.52	0.55	0.57	0.57	0.57	2.71
4. AGR., FORESTRY, & FISHERY SERV.	5.10	5.31	5.44	5.62	5.76	5.91	3.01
5. IRON ORE MINING	0.47	0.50	0.54	0.54	0.53	0.52	2.20
6. NONFERROUS METAL MINING	1.29	1.36	1.40	1.43	1.42	1.42	1.93
7. COAL MINING	2.96	3.17	3.33	3.44	3.59	3.70	4.44
8. CRUDE PETROLEUM & N. GAS	14.66	14.99	15.10	14.96	14.66	15.14	0.37
9. STONE&CLAY MINING & QUARRYING	1.34	1.37	1.42	1.46	1.51	1.53	2.70
10. CHEM&FERTILIZER MIN. MINING	0.50	0.52	0.53	0.55	0.55	0.56	1.99
11. NEW CONSTRUCTION	67.83	91.25	94.63	99.15	103.04	105.91	3.82
13. ORDNANCE & ACCESSORIES	10.10	10.42	10.69	11.03	11.26	11.46	2.56
14. FOOD & KINDRED PRODUCTS	27.20	27.93	28.45	28.70	26.76	28.90	1.21
15. FABRIC, YARN & THREAD MILLS	4.56	4.70	4.82	4.92	4.96	4.97	1.71
17. MISC. TEXTILE GOODS	2.24	2.33	2.43	2.52	2.57	2.60	3.06
18. APPAREL	12.00	12.16	12.50	12.79	12.66	12.93	1.49
19. MISC. FABRICATED TEXTILE PROD.	2.63	2.93	3.04	3.12	3.19	3.24	2.74
20. LUMBER & WOOD PRODUCTS	6.25	6.67	7.24	7.62	7.80	7.83	4.62
21. WOOD CONTAINERS	0.43	0.43	0.44	0.45	0.45	0.45	1.12
22. HOUSEHOLD FURNITURE	4.69	5.20	5.42	5.64	5.80	5.89	3.79
23. OTHER FURNITURE & FIXTURES	3.71	3.75	3.88	4.00	4.10	4.20	2.51
24. PAPER & ALLIED PRODUCTS	11.68	12.11	12.32	12.44	12.50	12.56	1.46
25. PAPERBOARD CONTAINERS & BOXES	3.24	3.35	3.46	3.55	3.62	3.67	2.52
26. PRINTING & PUBLISHING	67.36	66.10	69.07	70.03	70.74	71.39	1.17
27. CHEMICALS & PRODUCTS	22.07	22.60	23.06	23.40	23.64	23.66	1.58
28. PLASTICS & SYNTHETIC MATLS.	6.06	6.33	6.60	6.61	6.95	7.02	2.98
29. DRUGS, CLEANING & TOILET PREP.	23.53	23.90	24.48	24.99	25.20	25.48	1.60
30. PAINTS & ALLIED PRODUCTS	2.31	2.43	2.52	2.62	2.68	2.72	3.29
31. PET REFINING & REL. PROD.	7.45	7.45	7.50	7.57	7.59	7.59	0.36
32. RUBBER & MISC. PLASTICS PROD.	13.49	14.02	14.67	15.22	15.67	15.89	3.33
34. FOOTWEAR & OTHER LEATHER PROD.	2.35	2.36	2.37	2.36	2.34	2.33	-0.23
35. GLASS & GLASS PRODUCTS	3.07	3.16	3.25	3.31	3.33	3.34	1.68
36. STONE & CLAY PRODUCTS	8.14	6.39	8.62	8.91	9.04	9.01	2.05
37. PRIMARY FERROUS METALS	8.77	9.07	9.39	9.54	9.60	9.59	1.79
38. NONFERROUS METALS	8.12	6.49	8.91	9.25	9.47	9.67	3.58

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
59. SECRETARIES&OFFICE MACH. OPS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
39. METAL CONTAINERS	1.01	1.00	1.00	1.02	1.02	1.03	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	16.33	16.54	17.11	17.84	18.38	18.78	2.83
41. SCREW MACHINE PROD.&STAMPINGS	5.01	5.32	5.54	5.68	5.75	5.82	3.03
42. OTHER FAB. METAL PRODUCTS	9.20	9.53	10.00	10.35	10.63	10.91	3.47
43. ENGINES & TURBINES	3.44	3.57	3.73	3.79	3.84	3.88	2.46
44. FARM & GARDEN MACHINERY	3.25	3.34	3.51	3.56	3.59	3.63	2.22
45. CONSTR. & MINING MACHINERY	8.49	8.99	9.47	9.83	10.10	10.23	3.81
46. MATERIALS HANDLING MACH. & EQ.	3.03	3.14	3.33	3.47	3.57	3.65	3.79
47. METALWORKING MACH. & EQ.	9.66	10.13	10.80	11.32	11.72	12.02	4.46
48. SPECIAL INDUSTRY MACHINERY	6.15	6.32	6.67	7.01	7.22	7.41	3.77
49. GENERAL INDUSTRY MACHINERY	10.34	10.63	11.16	11.49	11.72	11.94	2.91
50. MISC. NONELECTRICAL MACH.	5.03	5.23	5.52	5.72	5.83	5.97	3.46
51. OFFICE, COMPUTING & ACCT. MACH.	20.73	21.67	22.69	23.21	23.64	24.27	3.21
52. SERVICE INDUSTRY MACHINES	5.18	5.44	5.74	5.88	5.94	5.99	2.92
53. ELECTRICAL MACHINERY	9.07	9.26	9.71	9.96	10.10	10.20	2.36
54. HOUSEHOLD APPLIANCES	3.03	3.14	3.25	3.38	3.48	3.55	3.19
55. ELECTRIC LIGHTING & WIRING EQ.	4.71	4.74	4.88	5.00	5.08	5.15	1.82
56. RADIO, TV, & COMMUNICATION EQ.	27.63	28.49	29.61	30.34	30.82	31.55	2.69
57. ELECTRONIC COMPONENTS & ACCESS.	12.09	12.69	13.42	14.05	14.55	14.94	4.34
58. MISC. ELECTRICAL MACH. & EQ.	4.07	4.23	4.42	4.50	4.58	4.64	2.70
59. MOTOR VEHICLES & EQUIPMENT	10.75	11.29	11.72	11.95	12.13	12.24	2.63
60. AIRCRAFT & PARTS	21.72	22.72	23.48	24.35	24.55	24.66	2.58
61. OTHER TRANSPORTATION EQ.	4.55	4.71	4.89	5.01	5.04	5.10	2.27
62. INSTRUMENTS & SUPPLIES	21.37	21.88	22.87	23.90	24.66	25.20	3.35
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	8.24	8.40	8.80	9.24	9.59	9.88	3.71
64. MISC. MANUFACTURING	9.85	9.99	10.31	10.60	10.77	10.85	1.95
65. TRANSPORTATION & WAREHOUSING	88.67	91.84	94.90	98.43	100.24	101.44	2.73
66. COMMUNICATION EXC. RADIO & TV	47.50	48.06	49.42	50.13	51.49	52.15	1.89
67. RADIO & TV BROADCASTING	12.51	13.04	13.52	13.84	14.07	14.30	2.71
68. UTILITIES	38.85	39.11	39.34	39.56	39.81	40.00	0.58
69. WHOLESALE & RETAIL TRADE	494.50	510.16	525.82	539.08	549.44	560.23	2.53
70. FINANCE & INSURANCE	512.89	522.97	535.12	550.24	566.22	581.50	2.54
71. REAL ESTATE & RENTAL	33.95	35.39	36.96	38.46	39.76	40.91	3.80
72. PERSONAL SERVICES EXC. AUTO.	48.72	50.58	52.66	54.77	56.88	58.87	3.86
73. BUSINESS SERVICES	266.46	277.11	288.83	302.29	314.03	323.85	3.98
74. EATING & DRINKING PLACES	4.23	4.37	4.50	4.59	4.67	4.73	2.26
75. AUTOMOBILE REPAIR & SERVICE	9.88	10.16	10.33	10.46	10.60	10.76	1.72
76. AMUSEMENTS	14.81	15.11	15.63	16.09	16.59	17.05	2.85
77. MISC. SERVICES	1,585.66	1,604.25	1,627.33	1,662.00	1,702.52	1,748.03	1.97

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
59. SECRETARIES&OFFICE MACH. DPS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GRDTH 82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	90.58	92.15	94.10	96.35	98.49	100.63	2.13
82. GOVERNMENT INDUSTRY	623.33	617.30	618.26	623.31	628.45	634.45	0.35
TOTAL, ALL INDUSTRIES	4,531.38	4,610.14	4,707.60	4,819.96	4,927.27	5,034.21	2.13

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
60. CLERICAL WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.03	0.03	0.03	0.03	0.03	0.03	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.05	0.05	0.05	0.06	0.06	0.06	2.77
3. FORESTRY & FISHERY PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	5.61
4. AGR., FORESTRY, & FISHERY SERV.	0.17	0.18	0.19	0.21	0.22	0.23	6.86
5. IRON ORE MINING	0.06	0.07	0.07	0.08	0.08	0.09	7.94
6. NONFERROUS METAL MINING	0.14	0.16	0.18	0.20	0.22	0.23	10.65
7. COAL MINING	0.24	0.27	0.29	0.32	0.35	0.36	9.15
8. CRUDE PETROLEUM & N. GAS	1.99	2.11	2.17	2.28	2.38	2.39	3.72
9. STONE & CLAY MINING & QUARRYING	0.22	0.25	0.27	0.31	0.34	0.36	9.92
10. CHEM & FERTILIZER MIN. MINING	0.02	0.02	0.02	0.02	0.02	0.02	7.93
11. NEW CONSTRUCTION	6.93	7.87	8.49	9.41	10.16	10.70	9.08
13. ORNANCE & ACCESSORIES	11.51	13.03	14.21	15.38	16.24	16.87	7.95
14. FOOD & KINDRED PRODUCTS	0.91	0.99	1.04	1.10	1.14	1.17	5.08
15. TOBACCO MANUFACTURES	0.01	0.01	0.01	0.01	0.01	0.01	6.98
16. FABRIC, YARN & THREAD MILLS	0.30	0.32	0.34	0.36	0.38	0.39	5.27
17. MISC. TEXTILE GOODS	0.14	0.16	0.17	0.18	0.19	0.20	7.01
18. APPAREL	0.33	0.35	0.37	0.39	0.42	0.44	5.95
19. MISC. FABRICATED TEXTILE PROD.	0.55	0.58	0.60	0.64	0.66	0.69	4.70
20. LUMBER & WOOD PRODUCTS	0.52	0.59	0.64	0.70	0.77	0.82	9.46
21. WOOD CONTAINERS	0.09	0.11	0.12	0.13	0.14	0.15	9.81
22. HOUSEHOLD FURNITURE	0.12	0.13	0.14	0.14	0.14	0.14	3.70
23. OTHER FURNITURE & FIXTURES	0.22	0.23	0.24	0.25	0.26	0.27	4.60
24. PAPER & ALLIED PRODUCTS	0.60	0.66	0.71	0.76	0.81	0.83	6.84
25. PAPERBOARD CONTAINERS & BOXES	0.33	0.36	0.40	0.44	0.47	0.50	8.78
26. PRINTING & PUBLISHING	3.28	3.56	3.81	4.11	4.32	4.45	6.29
27. CHEMICALS & PRODUCTS	1.79	1.97	2.11	2.29	2.45	2.57	7.47
28. PLASTICS & SYNTHETIC MATLS.	0.22	0.25	0.28	0.30	0.33	0.34	8.83
29. DRUGS, CLEANING & TOILET PREP.	0.16	0.16	0.17	0.18	0.19	0.19	4.28
30. PAINTS & ALLIED PRODUCTS	0.36	0.40	0.44	0.48	0.52	0.55	8.37
31. PET REFINING & REL. PROD.	0.73	0.77	0.81	0.87	0.91	0.93	5.09
32. RUBBER & MISC. PLASTICS PROD.	1.21	1.37	1.52	1.71	1.87	1.98	10.46
34. FOOTWEAR & OTHER LEATHER PROD.	0.04	0.04	0.04	0.04	0.05	0.05	5.88
35. GLASS & GLASS PRODUCTS	0.22	0.25	0.28	0.31	0.34	0.37	10.94
36. STONE & CLAY PRODUCTS	0.97	1.11	1.19	1.31	1.40	1.47	8.73
37. PRIMARY FERROUS METALS	2.56	2.84	3.06	3.33	3.54	3.69	7.56
38. NONFERROUS METALS	2.11	2.42	2.66	2.93	3.15	3.30	9.33
39. METAL CONTAINERS	0.05	0.05	0.06	0.06	0.07	0.07	6.59

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
60. CLERICAL WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
40. FAB. STRUCTURAL METAL PRODUCTS	1.98	2.23	2.39	2.57	2.73	2.88	7.77
41. SCREW MACHINE PRDD.&STAMPINGS	1.19	1.33	1.43	1.57	1.66	1.73	7.71
42. OTHER FAB. METAL PRODUCTS	1.36	1.55	1.70	1.89	2.05	2.16	9.78
43. ENGINES & TURBINES	0.66	0.75	0.82	0.87	0.92	0.96	7.72
44. FARM & GARDEN MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	8.65
45. CONSTR. & MINING MACHINERY	0.28	0.31	0.34	0.37	0.39	0.40	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.48	0.56	0.61	0.67	0.72	0.75	9.12
47. METALWORKING MACH. & EQ.	1.31	1.51	1.65	1.83	1.97	2.05	9.36
48. SPECIAL INDUSTRY MACHINERY	0.12	0.14	0.15	0.18	0.20	0.21	12.14
49. GENERAL INDUSTRY MACHINERY	1.26	1.42	1.53	1.65	1.75	1.83	7.67
50. MISC. NONELECTRICAL MACH.	1.55	1.69	1.85	2.03	2.16	2.23	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	1.48	1.69	1.84	1.97	2.05	2.11	7.31
52. SERVICE INDUSTRY MACHINES	0.27	0.31	0.35	0.40	0.45	0.51	13.37
53. ELECTRICAL MACHINERY	1.28	1.46	1.60	1.76	1.90	1.99	9.22
54. HOUSEHOLD APPLIANCES	0.02	0.02	0.03	0.03	0.03	0.03	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.78	0.88	0.95	1.04	1.12	1.17	8.44
56. RADIO, TV, & COMMUNICATION EQ.	24.39	28.02	30.75	33.32	35.03	35.79	7.97
57. ELECTRONIC COMPONENTS & ACCESS.	7.19	8.55	9.63	10.77	11.75	12.32	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.31	0.35	0.38	0.42	0.46	0.48	9.67
59. MOTOR VEHICLES & EQUIPMENT	0.80	0.95	1.08	1.29	1.51	1.77	17.20
60. AIRCRAFT & PARTS	25.38	28.71	31.63	34.90	37.33	38.32	8.59
61. OTHER TRANSPORTATION EQ.	4.40	4.64	4.79	4.89	5.04	5.19	3.39
62. INSTRUMENTS & SUPPLIES	5.60	6.32	6.90	7.55	8.05	8.33	8.26
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.88	0.97	1.05	1.15	1.25	1.32	8.51
64. MISC. MANUFACTURING	0.43	0.47	0.50	0.53	0.56	0.58	6.15
65. TRANSPORTATION & WAREHOUSING	44.23	46.83	48.99	52.06	54.19	55.28	4.58
66. COMMUNICATION EXC. RADIO & TV	12.34	13.04	13.80	14.84	15.62	15.90	5.21
67. RADIO & TV BROADCASTING	0.40	0.45	0.49	0.53	0.57	0.59	8.19
68. UTILITIES	3.55	3.88	4.17	4.47	4.69	4.77	6.10
69. WHOLESALE & RETAIL TRADE	25.15	28.48	31.42	34.86	37.79	39.83	9.63
70. FINANCE & INSURANCE	16.78	18.95	20.90	23.18	25.09	26.28	9.38
71. REAL ESTATE & RENTAL	1.92	2.13	2.33	2.55	2.72	2.83	8.08
72. PERSONAL SERVICES EXC. AUTO.	8.16	9.11	9.83	10.68	11.34	11.83	7.70
73. BUSINESS SERVICES	20.16	22.66	24.90	27.49	29.51	30.71	8.79
74. EATING & DRINKING PLACES	4.23	4.92	5.54	6.23	6.80	7.18	11.15
75. AUTOMOBILE REPAIR & SERVICE	1.13	1.25	1.34	1.45	1.54	1.59	7.12
76. AMUSEMENTS	1.12	1.24	1.34	1.47	1.58	1.67	8.27
77. MISC. SERVICES	14.55	14.91	15.50	16.41	17.16	17.55	3.83
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	10.57	11.03	11.60	12.26	12.71	12.95	4.14

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
60. CLERICAL WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	119.37	117.22	119.66	123.16	125.39	126.43	1.16
TOTAL, ALL INDUSTRIES	406.26	434.68	463.02	496.70	522.50	537.48	5.76
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	4.73	4.77	4.70	4.61	4.58	4.54	-0.81
2. OTHER AGRICULTURAL PRODUCTS	34.24	34.38	34.54	34.42	34.35	34.30	0.03
3. FORESTRY & FISHERY PRODUCTS	0.65	0.68	0.72	0.75	0.75	0.74	2.66
4. AGR., FORESTRY, & FISHERY SERV.	8.98	9.23	9.33	9.53	9.65	9.80	1.76
5. IRON ORE MINING	1.16	1.25	1.33	1.32	1.29	1.27	1.77
6. NONFERROUS METAL MINING	2.38	2.51	2.60	2.68	2.84	2.64	2.10
7. COAL MINING	8.39	8.84	9.18	9.42	9.74	9.96	3.48
8. CRUDE PETROLEUM & N. GAS	26.98	26.83	26.84	26.02	25.53	25.61	-1.04
9. STONE & CLAY MINING & QUARRYING	7.09	7.24	7.48	7.79	7.96	8.03	2.52
10. CHEM & FERTILIZER MIN. MINING	0.85	0.87	0.90	0.92	0.93	0.93	2.03
11. NEW CONSTRUCTION	184.38	189.06	193.69	200.63	206.26	209.90	2.63
13. ORNANCE & ACCESSORIES	19.04	19.49	19.85	20.33	20.62	20.86	1.84
14. FOOD & KINDRED PRODUCTS	136.42	138.29	139.12	138.63	137.28	136.17	-0.04
15. TOBACCO MANUFACTURES	5.23	5.23	5.15	5.06	5.00	4.90	-1.32
16. FABRIC, YARN & THREAD MILLS	24.16	24.91	25.61	26.15	26.42	26.50	1.87
17. MISC. TEXTILE GOODS	9.88	10.25	10.68	11.00	11.17	11.24	2.62
18. APPAREL	91.37	92.03	94.02	95.69	95.71	95.66	0.92
19. MISC. FABRICATED TEXTILE PROO.	18.55	19.02	19.54	19.91	20.15	20.35	1.87
20. LUMBER & WOOD PRODUCTS	25.16	27.38	28.56	29.77	30.20	30.08	3.62
21. WOOD CONTAINERS	1.59	1.58	1.61	1.65	1.67	1.68	1.15
22. HOUSEHOLD FURNITURE	20.24	21.35	22.05	22.79	23.28	23.50	3.03
23. OTHER FURNITURE & FIXTURES	13.82	13.92	14.35	14.78	15.08	15.39	2.18
24. PAPER & ALLIED PRODUCTS	32.12	33.13	33.55	33.72	33.75	33.76	1.00
25. PAPERBOARD CONTAINERS & BOXES	14.79	15.19	15.54	15.84	16.01	16.11	1.72
26. PRINTING & PUBLISHING	208.85	209.99	211.91	213.78	214.91	215.89	0.67
27. CHEMICALS & PRODUCTS	37.18	37.82	38.35	38.67	38.85	39.00	0.96
28. PLASTICS & SYNTHETIC MATLS.	9.26	9.61	9.97	10.24	10.39	10.44	2.43
29. DRUGS, CLEANING & TOILET PREP.	43.90	44.25	44.98	45.59	45.65	45.84	0.87
30. PAINTS & ALLIED PRODUCTS	6.93	7.27	7.54	7.81	7.99	8.09	3.14
31. PET REFINING & REL. PROO.	13.53	13.50	13.56	13.66	13.67	13.64	0.16
32. RUBBER & MISC. PLASTICS PROO.	44.31	45.88	47.89	49.51	50.84	51.42	3.02
34. FOOTWEAR & OTHER LEATHER PROO.	13.49	13.60	13.74	13.78	13.75	13.73	0.35
35. GLASS & GLASS PRODUCTS	10.00	10.34	10.69	10.94	11.05	11.10	2.10
36. STONE & CLAY PRODUCTS	30.03	30.77	31.41	32.31	32.58	32.31	1.47

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OFFENSE ECONOMIC IMPACT MOOELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
60. CLERICAL WORKERS NEC  
(THOUSANOS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
37. PRIMARY FERROUS METALS	35.93	36.93	37.99	38.36	38.41	38.16	1.21
38. NONFERROUS METALS	24.94	25.86	26.91	27.70	28.15	28.54	2.74
39. METAL CONTAINERS	3.45	3.40	3.40	3.46	3.49	3.51	0.34
40. FAB. STRUCTURAL METAL PRODUCTS	44.38	44.54	45.70	47.29	48.36	49.06	2.03
41. SCREW MACHINE PROO.&STAMPINGS	19.44	20.44	21.10	21.46	21.58	21.68	2.18
42. OTHER FAB. METAL PRODUCTS	29.49	30.42	31.77	32.78	33.53	34.31	3.07
43. ENGINES & TURBINES	7.96	8.22	8.52	8.61	8.66	8.69	1.78
44. FARM & GAROEN MACHINERY	9.54	9.85	10.41	10.61	10.78	10.94	2.78
45. CONSTR. & MINING MACHINERY	23.87	25.23	26.55	27.49	28.23	28.54	3.64
46. MATERIALS HANOLING MACH. & EQ.	8.53	8.80	9.34	9.72	9.99	10.19	3.62
47. METALWORKING MACH. & EQ.	25.49	26.52	28.10	29.24	30.08	30.65	3.76
48. SPECIAL INDUSTRY MACHINERY	16.38	16.74	17.58	18.38	18.85	19.25	3.29
49. GENERAL INDUSTRY MACHINERY	28.82	29.58	31.02	31.89	32.48	33.04	2.77
50. MISC. NONELECTRICAL MACH.	13.54	13.90	14.48	14.81	14.95	15.12	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	39.29	40.84	42.56	43.32	43.93	44.92	2.72
52. SERVICE INDUSTRY MACHINES	14.92	15.51	16.25	16.51	16.55	16.55	2.10
53. ELECTRICAL MACHINERY	25.67	26.15	27.36	28.01	28.34	28.57	2.16
54. HOUSEHOL APPLIANCES	8.16	8.38	8.61	8.90	9.10	9.22	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	16.34	16.49	16.96	17.40	17.69	17.94	1.88
56. RADIO, TV, & COMMUNICATION EQ.	57.76	59.03	60.80	61.78	62.27	63.23	1.83
57. ELECTRONIC COMPONENTS & ACCESS.	32.82	34.22	35.93	37.38	38.45	39.26	3.65
58. MISC. ELECTRICAL MACH. & EQ.	11.28	11.68	12.15	12.30	12.47	12.58	2.21
59. MOTOR VEHICLES & EQUIPMENT	41.31	43.21	44.69	45.43	45.95	46.23	2.28
60. AIRCRAFT & PARTS	50.83	52.86	54.30	56.01	56.15	56.10	2.00
61. OTHER TRANSPORTATION EQ.	15.18	15.63	16.19	16.55	16.59	16.74	1.97
62. INSTRUMENTS & SUPPLIES	48.14	48.99	50.94	52.93	54.35	55.26	2.80
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	20.22	20.50	21.37	22.30	23.03	23.61	3.15
64. MISC. MANUFACTURING	38.75	39.39	40.72	41.92	42.63	43.00	2.10
65. TRANSPORTATION & WAREHOUSING	1,040.40	1,085.71	1,089.33	1,117.77	1,126.54	1,128.33	1.64
66. COMMUNICATION EXC. RADIO & TV	497.25	501.14	513.33	518.75	530.85	535.73	1.50
67. RADIO & TV BROACASTING	20.16	20.79	21.35	21.65	21.82	22.00	1.76
68. UTILITIES	164.79	165.16	165.41	165.58	165.93	166.01	0.15
69. WHOLESALE & RETAIL TRAOE	4,110.20	4,243.15	4,376.27	4,489.35	4,578.34	4,670.94	2.58
70. FINANCE & INSURANCE	1,959.27	1,992.53	2,033.70	2,086.17	2,141.86	2,194.88	2.30
71. REAL ESTATE & RENTAL	69.76	71.02	72.57	74.02	75.11	75.97	1.72
72. PERSONAL SERVICES EXC. AUTO.	445.16	449.14	455.18	461.34	467.55	472.89	1.21
73. BUSINESS SERVICES	415.39	429.22	444.67	462.76	478.18	490.64	3.39
74. EATING & ORINKING PLACES	273.84	282.83	291.38	297.55	303.09	307.44	2.34
75. AUTOMOBILE REPAIR & SERVICE	77.83	79.23	79.83	80.12	80.49	81.08	0.82

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
60. CLERICAL WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
76. AMUSEMENTS	115.09	116.50	119.57	122.21	125.05	127.65	2.09
77. MISC. SERVICES	2,253.19	2,277.42	2,308.06	2,355.14	2,410.48	2,472.86	1.88
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	266.29	271.55	277.70	283.98	289.43	294.48	2.03
82. GOVERNMENT INDUSTRY	1,431.78	1,429.04	1,442.97	1,468.30	1,493.53	1,515.84	1.15
TOTAL, ALL INDUSTRIES	14,964.86	15,260.59	15,606.23	15,959.40	16,265.42	16,549.22	2.03

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
61. CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.10	0.11	0.11	0.11	0.12	0.12	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.18	0.18	0.19	0.20	0.20	0.21	2.66
3. FORESTRY & FISHERY PRODUCTS	0.05	0.05	0.05	0.06	0.06	0.06	5.85
4. AGR., FORESTRY, & FISHERY SERV.	0.18	0.20	0.21	0.23	0.25	0.26	6.86
5. IRON ORE MINING	0.74	0.86	0.93	1.00	1.05	1.08	7.79
6. NONFERROUS METAL MINING	1.13	1.33	1.47	1.64	1.79	1.90	11.03
7. COAL MINING	2.44	2.78	3.06	3.35	3.66	3.84	9.46
8. CRUDE PETROLEUM & N. GAS	3.32	3.54	3.66	3.86	4.05	4.09	4.28
9. STONE&CLAY MINING & QUARRYING	0.82	0.93	1.01	1.14	1.24	1.32	9.96
10. CHEM&FERTILIZER MIN. MINING	0.13	0.15	0.16	0.18	0.19	0.20	7.91
11. NEW CONSTRUCTION	72.56	81.96	88.04	97.14	104.42	109.47	8.57
13. ORONANCE & ACCESSORIES	24.74	27.97	30.46	32.93	34.74	36.05	7.82
14. FOOD & KINDRED PRODUCTS	1.44	1.56	1.64	1.74	1.81	1.85	5.23
15. TOBACCO MANUFACTURES	0.02	0.02	0.02	0.02	0.02	0.02	7.32
16. FABRIC, YARN & THREAD MILLS	0.94	1.00	1.05	1.11	1.15	1.18	4.69
17. MISC. TEXTILE GOODS	0.24	0.26	0.28	0.31	0.33	0.34	7.29
18. APPAREL	0.38	0.41	0.43	0.46	0.49	0.52	6.34
19. MISC. FABRICATED TEXTILE PROD.	0.44	0.46	0.48	0.51	0.52	0.54	4.43
20. LUMBER & WOOD PRODUCTS	2.17	2.46	2.66	2.90	3.16	3.35	9.06
21. WOOD CONTAINERS	0.23	0.26	0.29	0.32	0.34	0.36	9.81
22. HOUSEHOLD FURNITURE	0.39	0.42	0.45	0.47	0.48	0.47	3.70
23. OTHER FURNITURE & FIXTURES	0.49	0.51	0.53	0.56	0.59	0.61	4.71
24. PAPER & ALLIED PRODUCTS	1.91	2.09	2.26	2.43	2.55	2.63	6.66
25. PAPERBOARD CONTAINERS & BOXES	0.66	0.75	0.82	0.90	0.97	1.02	9.06
26. PRINTING & PUBLISHING	5.53	5.95	6.33	6.78	7.08	7.24	5.55
27. CHEMICALS & PRODUCTS	4.21	4.64	4.98	5.40	5.80	6.08	7.65
28. PLASTICS & SYNTHETIC MATLS.	0.98	1.09	1.21	1.33	1.43	1.49	8.81
29. DRUGS, CLEANING & TOILET PREP.	0.12	0.13	0.13	0.14	0.14	0.15	4.23
30. PAINTS & ALLIED PRODUCTS	0.24	0.27	0.29	0.32	0.34	0.36	8.24
31. PET REFINING & REL. PROD.	1.75	1.85	1.95	2.08	2.19	2.26	5.23
32. RUBBER & MISC. PLASTICS PROD.	3.00	3.39	3.77	4.22	4.62	4.88	10.25
33. LEATHER TANNING & FINISHING	0.01	0.01	0.01	0.01	0.01	0.01	5.35
34. FOOTWEAR & OTHER LEATHER PROD.	0.03	0.04	0.04	0.04	0.04	0.04	5.44
35. GLASS & GLASS PRODUCTS	0.73	0.81	0.89	0.98	1.06	1.12	9.03
36. STONE & CLAY PRODUCTS	2.41	2.75	2.95	3.25	3.48	3.65	8.59
37. PRIMARY FERROUS METALS	13.78	15.27	16.43	17.84	18.94	19.67	7.36
38. NONFERROUS METALS	7.88	9.03	9.93	10.95	11.80	12.35	9.42

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
61. CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
39. METAL CONTAINERS	0.34	0.37	0.39	0.42	0.45	0.47	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	5.97	6.70	7.14	7.66	8.11	8.53	7.40
41. SCREW MACHINE PROD.&STAMPINGS	5.29	5.93	6.38	6.97	7.41	7.72	7.84
42. OTHER FAB. METAL PRODUCTS	2.58	2.95	3.23	3.57	3.86	4.08	9.63
43. ENGINES & TURBINES	1.75	1.98	2.17	2.30	2.43	2.54	7.72
44. FARM & GARDEN MACHINERY	0.06	0.07	0.08	0.08	0.09	0.09	8.24
45. CONSTR. & MINING MACHINERY	0.48	0.54	0.58	0.63	0.66	0.68	7.18
46. MATERIALS HANDLING MACH. & EQ.	0.83	0.95	1.03	1.14	1.23	1.28	9.06
47. METALWORKING MACH. & EQ.	4.50	5.16	5.66	6.26	6.72	7.00	9.23
48. SPECIAL INDUSTRY MACHINERY	0.24	0.28	0.31	0.36	0.40	0.43	12.08
49. GENERAL INDUSTRY MACHINERY	2.36	2.65	2.85	3.07	3.26	3.40	7.51
50. MISC. NONELECTRICAL MACH.	4.75	5.18	5.70	6.27	6.67	6.89	7.70
51. OFFICE, COMPUTING & ACCT. MACH.	1.85	2.16	2.38	2.59	2.72	2.83	8.86
52. SERVICE INDUSTRY MACHINES	0.50	0.58	0.64	0.73	0.83	0.93	13.37
53. ELECTRICAL MACHINERY	2.45	2.80	3.07	3.37	3.63	3.79	9.15
54. HOUSEHOLD APPLIANCES	0.05	0.06	0.06	0.07	0.07	0.08	9.37
55. ELECTRIC LIGHTING & WIRING EQ.	1.46	1.64	1.76	1.93	2.07	2.16	8.25
56. RADIO, TV, & COMMUNICATION EQ.	31.73	36.25	39.58	42.66	44.63	45.37	7.41
57. ELECTRONIC COMPONENTS & ACCESS.	14.48	17.22	19.39	21.67	23.64	24.76	11.32
58. MISC. ELECTRICAL MACH. & EQ.	0.73	0.84	0.92	1.01	1.10	1.15	9.57
59. MOTOR VEHICLES & EQUIPMENT	3.47	4.14	4.70	5.58	6.54	7.65	17.15
60. AIRCRAFT & PARTS	56.72	64.06	70.47	77.63	82.90	84.97	8.42
61. OTHER TRANSPORTATION EQ.	25.52	26.91	27.78	28.35	29.25	30.15	3.39
62. INSTRUMENTS & SUPPLIES	7.15	8.06	8.80	9.64	10.27	10.64	8.29
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.66	1.83	2.00	2.21	2.39	2.53	8.82
64. MISC. MANUFACTURING	0.58	0.63	0.66	0.71	0.74	0.76	5.42
65. TRANSPORTATION & WAREHOUSING	16.66	17.59	18.36	19.46	20.20	20.55	4.30
66. COMMUNICATION EXC. RADIO & TV	9.96	10.52	11.13	11.97	12.59	12.81	5.17
67. RADIO & TV BROADCASTING	0.03	0.03	0.04	0.04	0.04	0.05	8.18
68. UTILITIES	6.57	7.17	7.70	8.25	8.66	8.79	6.01
69. WHOLESALE & RETAIL TRADE	9.84	11.21	12.44	13.88	15.13	16.03	10.26
70. FINANCE & INSURANCE	0.17	0.19	0.21	0.24	0.26	0.27	9.57
71. REAL ESTATE & RENTAL	1.86	2.04	2.20	2.38	2.52	2.59	6.86
72. PERSONAL SERVICES EXC. AUTO.	5.26	5.99	6.59	7.30	7.89	8.38	9.76
73. BUSINESS SERVICES	4.78	5.38	5.92	6.55	7.04	7.34	8.98
74. EATING & DRINKING PLACES	0.08	0.10	0.11	0.12	0.13	0.13	9.76
75. AUTOMOBILE REPAIR & SERVICE	3.19	3.52	3.78	4.09	4.34	4.47	7.01
76. AMUSEMENTS	0.54	0.59	0.64	0.70	0.75	0.79	7.96
77. MISC. SERVICES	2.74	2.83	2.95	3.14	3.30	3.39	4.29

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
61. CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
61. SELF-EMPLOYED & UNPAID FAMILY WORKERS	79.55	83.10	87.17	91.81	94.84	96.41	3.92
82. GOVERNMENT INDUSTRY	189.86	186.25	189.81	195.01	198.15	199.44	0.99
TOTAL, ALL INDUSTRIES	664.96	711.91	755.98	808.72	849.06	873.15	5.60
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	16.84	16.98	16.72	16.42	16.30	16.17	-0.81
2. OTHER AGRICULTURAL PRODUCTS	121.68	122.03	122.47	121.92	121.53	121.23	-0.07
3. FORESTRY & FISHERY PRODUCTS	1.87	1.97	2.10	2.19	2.19	2.16	2.90
4. AGR., FORESTRY, & FISHERY SERV.	10.00	10.27	10.38	10.61	10.74	10.91	1.76
5. IRON ORE MINING	14.56	15.61	16.68	16.50	16.16	15.79	1.64
6. NONFERROUS METAL MINING	19.39	20.48	21.30	21.86	21.73	21.89	2.45
7. COAL MINING	87.28	92.15	95.98	98.72	102.33	104.87	3.74
8. CRUDE PETROLEUM & N. GAS	44.99	44.97	44.90	44.08	43.48	43.86	-0.51
9. STONE&CLAY MINING & QUARRYING	26.09	26.64	27.54	28.71	29.34	29.61	2.56
10. CHEM&FERTILIZER MIN. MINING	6.68	6.85	7.07	7.24	7.31	7.37	2.01
11. NEW CONSTRUCTION	1,930.95	1,969.88	2,008.26	2,070.62	2,119.39	2,147.66	2.15
13. ORNANCE & ACCESSORIES	40.92	41.84	42.56	43.54	44.10	44.56	1.72
14. FOOD & KINDRED PRODUCTS	214.86	218.10	219.72	219.24	217.41	215.95	0.10
15. TOBACCO MANUFACTURES	13.35	13.37	13.23	13.04	12.91	12.70	-1.00
16. FABRIC, YARN & THREAD MILLS	75.48	77.39	79.14	80.37	80.76	80.54	1.31
17. MISC. TEXTILE GOODS	16.51	17.17	17.91	18.53	18.87	19.03	2.88
18. APPAREL	106.44	107.62	110.35	112.72	113.15	113.48	1.29
19. MISC. FABRICATED TEXTILE PROD.	14.76	15.09	15.46	15.72	15.87	15.99	1.61
20. LUMBER & WOOD PRODUCTS	105.10	113.91	118.38	122.93	124.29	123.27	3.24
21. WOOD CONTAINERS	3.82	3.82	3.89	3.99	4.03	4.05	1.16
22. HOUSEHOLD FURNITURE	67.81	71.52	73.86	76.33	78.00	78.72	3.03
23. OTHER FURNITURE & FIXTURES	30.69	30.95	31.94	32.93	33.65	34.36	2.29
24. PAPER & ALLIED PRODUCTS	102.44	105.50	106.65	107.04	106.96	106.84	0.85
25. PAPERBOARD CONTAINERS & BOXES	30.19	31.09	31.89	32.58	33.02	33.30	1.97
26. PRINTING & PUBLISHING	351.86	351.20	351.87	352.51	351.96	351.24	-0.04
27. CHEMICALS & PRODUCTS	87.37	89.04	90.44	91.35	91.91	92.41	1.13
28. PLASTICS & SYNTHETIC MATLS.	40.52	42.05	43.64	44.78	45.43	45.64	2.41
29. DRUGS, CLEANING & TOILET PREP.	33.84	34.09	34.64	35.09	35.13	35.25	0.82
30. PAINTS & ALLIED PRODUCTS	4.60	4.82	4.99	5.17	5.27	5.34	3.01
31. PET REFINING & REL. PROD.	32.46	32.42	32.61	32.91	32.97	32.93	0.29
32. RUBBER & MISC. PLASTICS PROD.	110.12	113.79	118.52	122.32	125.38	126.60	2.83
33. LEATHER TANNING & FINISHING	1.56	1.61	1.67	1.67	1.67	1.66	1.26
34. FOOTWEAR & OTHER LEATHER PROD.	13.10	13.15	13.23	13.21	13.13	13.05	-0.07



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
61. CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
35. GLASS & GLASS PRODUCTS	32.97	33.45	33.96	34.15	33.92	33.55	0.35
36. STONE & CLAY PRODUCTS	74.78	76.49	77.98	80.11	80.88	79.89	1.33
37. PRIMARY FERROUS METALS	193.43	198.43	203.74	205.40	205.33	203.64	1.03
38. NONFERROUS METALS	93.05	96.57	100.58	103.61	105.37	106.93	2.82
39. METAL CONTAINERS	23.27	22.94	22.99	23.40	23.56	23.68	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	133.71	133.72	136.70	140.98	143.70	145.34	1.68
41. SCREW MACHINE PROD.&STAMPINGS	86.29	90.83	93.90	95.62	96.23	96.72	2.31
42. OTHER FAB. METAL PRODUCTS	56.04	57.72	60.20	62.03	63.36	64.76	2.94
43. ENGINES & TURBINES	21.02	21.70	22.50	22.74	22.86	22.96	1.76
44. FARM & GARDEN MACHINERY	19.32	19.86	20.91	21.22	21.49	21.75	2.39
45. CONSTR. & MINING MACHINERY	40.87	43.18	45.42	47.00	48.23	48.74	3.58
46. MATERIALS HANDLING MACH. & EQ.	14.61	15.07	15.97	16.62	17.08	17.41	3.56
47. METALWORKING MACH. & EQ.	87.47	90.91	98.20	99.99	102.78	104.58	3.64
48. SPECIAL INDUSTRY MACHINERY	33.52	34.23	35.94	37.55	38.47	39.27	3.22
49. GENERAL INDUSTRY MACHINERY	53.89	55.23	57.82	59.36	60.36	61.33	2.62
50. MISC. NONELECTRICAL MACH.	41.52	42.67	44.55	45.62	46.11	46.71	2.38
51. OFFICE, COMPUTING & ACCT. MACH.	49.19	52.00	55.02	56.82	58.37	60.42	4.20
52. SERVICE INDUSTRY MACHINES	27.55	28.64	30.01	30.49	30.56	30.58	2.10
53. ELECTRICAL MACHINERY	49.21	50.09	52.37	53.59	54.19	54.60	2.10
54. HOUSEHOLD APPLIANCES	20.28	20.81	21.35	22.05	22.50	22.79	2.36
55. ELECTRIC LIGHTING & WIRING EQ.	30.48	30.68	31.51	32.27	32.75	33.16	1.70
56. RADIO, TV, & COMMUNICATION EQ.	75.14	76.38	78.26	79.11	79.33	80.15	1.30
57. ELECTRONIC COMPONENTS & ACCESS.	66.11	68.91	72.31	75.20	77.32	78.92	3.61
58. MISC. ELECTRICAL MACH. & EQ.	26.93	27.87	28.98	29.31	29.68	29.91	2.12
59. MOTOR VEHICLES & EQUIPMENT	179.22	187.38	193.76	196.88	199.07	200.21	2.24
60. AIRCRAFT & PARTS	113.61	117.96	120.99	124.59	124.69	124.41	1.63
61. OTHER TRANSPORTATION EQ.	88.07	90.71	93.95	96.01	96.27	97.13	1.98
62. INSTRUMENTS & SUPPLIES	61.39	62.49	65.00	67.56	69.38	70.56	2.82
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	38.26	38.90	40.68	42.58	44.10	45.33	3.45
64. MISC. MANUFACTURING	52.62	53.11	54.51	55.74	56.31	56.42	1.40
65. TRANSPORTATION & WAREHOUSING	391.84	400.33	408.16	417.75	419.97	419.58	1.38
66. COMMUNICATION EXC. RADIO & TV	401.41	404.40	414.11	418.34	427.95	431.74	1.47
67. RADIO & TV BROADCASTING	1.54	1.59	1.63	1.66	1.67	1.68	1.75
68. UTILITIES	305.15	305.57	305.76	305.82	306.20	306.10	0.06
69. WHOLESALE & RETAIL TRADE	1,607.54	1,669.82	1,732.39	1,787.19	1,832.47	1,879.19	3.17
70. FINANCE & INSURANCE	20.03	20.41	20.87	21.44	22.05	22.63	2.48
71. REAL ESTATE & RENTAL	67.52	67.89	68.55	69.14	69.41	69.49	0.58
72. PERSONAL SERVICES EXC. AUTO.	286.69	295.28	305.21	315.25	325.34	334.69	3.14
73. BUSINESS SERVICES	98.42	101.90	105.76	110.25	114.11	117.26	3.57

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
61. CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
74. EATING & DRINKING PLACES	5.37	5.47	5.56	5.61	5.65	5.66	1.08
75. AUTOMOBILE REPAIR & SERVICE	219.88	223.57	225.02	225.59	226.44	227.89	0.72
76. AMUSEMENTS	55.08	55.59	56.89	57.98	59.17	60.24	1.81
77. MISC. SERVICES	425.16	431.81	439.65	450.62	463.19	477.15	2.33
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1,234.64	1,261.45	1,291.29	1,320.18	1,341.98	1,358.83	1.94
82. GOVERNMENT INDUSTRY	936.76	932.47	938.63	950.97	963.46	977.27	0.85
TOTAL, ALL INDUSTRIES	11,735.48	11,990.32	12,273.89	12,548.51	12,755.70	12,915.93	1.94

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
82. CONSTRUCTION CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN. % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.03	0.03	0.03	0.03	0.03	0.03	2.58
2. OTHER AGRICULTURAL PRODUCTS	0.04	0.04	0.05	0.05	0.05	0.05	2.77
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.99
4. AGR., FORESTRY, & FISHERY SERV.	0.01	0.02	0.02	0.02	0.02	0.02	8.88
5. IRON ORE MINING	0.11	0.13	0.14	0.15	0.16	0.17	8.06
6. NONFERROUS METAL MINING	0.15	0.17	0.19	0.21	0.23	0.25	11.33
7. COAL MINING	0.18	0.20	0.22	0.24	0.26	0.27	8.42
8. CRUDE PETROLEUM & N. GAS	0.13	0.13	0.14	0.15	0.15	0.16	4.28
9. STONE & CLAY MINING & QUARRYING	0.02	0.03	0.03	0.03	0.04	0.04	10.01
10. CHEM & FERTILIZER MIN. MINING	0.02	0.02	0.02	0.02	0.02	0.03	7.92
11. NEW CONSTRUCTION	51.08	57.67	61.95	68.38	73.49	77.05	8.58
13. ORDNANCE & ACCESSORIES	4.92	5.58	6.09	6.59	6.96	7.24	8.02
14. FOOD & KINDRED PRODUCTS	0.05	0.05	0.06	0.06	0.06	0.07	5.32
16. FABRIC, YARN & THREAD MILLS	0.05	0.05	0.06	0.06	0.06	0.06	4.32
17. MISC. TEXTILE GOODS	0.02	0.02	0.02	0.02	0.02	0.02	7.14
19. MISC. FABRICATED TEXTILE PROD.	0.02	0.02	0.02	0.02	0.02	0.02	4.65
20. LUMBER & WOOD PRODUCTS	0.38	0.43	0.47	0.53	0.59	0.64	11.97
21. WOOD CONTAINERS	0.03	0.04	0.04	0.05	0.05	0.05	9.79
22. HOUSEHOLD FURNITURE	0.01	0.01	0.01	0.01	0.01	0.01	3.88
23. OTHER FURNITURE & FIXTURES	0.03	0.03	0.04	0.04	0.04	0.04	4.80
24. PAPER & ALLIED PRODUCTS	0.25	0.28	0.30	0.32	0.34	0.35	6.70
25. PAPERBOARD CONTAINERS & BOXES	0.02	0.02	0.03	0.03	0.03	0.03	8.79
26. PRINTING & PUBLISHING	0.05	0.05	0.06	0.06	0.06	0.06	6.24
27. CHEMICALS & PRODUCTS	0.73	0.80	0.88	0.94	1.01	1.08	7.80
28. PLASTICS & SYNTHETIC MATLS.	0.13	0.14	0.16	0.17	0.19	0.19	8.38
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.02	0.02	0.02	0.02	4.22
30. PAINTS & ALLIED PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	8.21
31. PET REFINING & REL. PROD.	0.38	0.38	0.41	0.43	0.46	0.47	5.23
32. RUBBER & MISC. PLASTICS PROD.	0.18	0.18	0.20	0.23	0.25	0.26	10.22
35. GLASS & GLASS PRODUCTS	0.07	0.08	0.09	0.10	0.10	0.11	9.11
36. STONE & CLAY PRODUCTS	0.30	0.34	0.37	0.40	0.43	0.45	8.34
37. PRIMARY FERROUS METALS	1.70	1.88	2.02	2.20	2.33	2.43	7.42
38. NONFERROUS METALS	0.79	0.91	1.01	1.12	1.21	1.27	9.85
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.02	0.02	6.59
40. FAB. STRUCTURAL METAL PRODUCTS	0.52	0.58	0.62	0.67	0.70	0.74	7.27
41. SCREW MACHINE PROD. & STAMPINGS	0.28	0.29	0.32	0.34	0.37	0.38	7.89
42. OTHER FAB. METAL PRODUCTS	0.10	0.11	0.13	0.14	0.15	0.16	9.98

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
62. CONSTRUCTION CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
43. ENGINES & TURBINES	0.17	0.19	0.21	0.23	0.24	0.25	7.72
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.10
45. CONSTR. & MINING MACHINERY	0.04	0.04	0.05	0.05	0.05	0.05	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.06	0.07	0.08	0.09	0.10	0.10	9.12
47. METALWORKING MACH. & EQ.	0.15	0.17	0.19	0.21	0.23	0.24	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	12.05
49. GENERAL INDUSTRY MACHINERY	0.16	0.18	0.19	0.20	0.22	0.23	7.52
50. MISC. NONELECTRICAL MACH.	0.12	0.13	0.15	0.16	0.17	0.17	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.05	0.05	0.06	0.06	0.06	7.30
52. SERVICE INDUSTRY MACHINES	0.03	0.04	0.04	0.05	0.05	0.06	13.37
53. ELECTRICAL MACHINERY	0.15	0.17	0.19	0.21	0.22	0.23	9.03
55. ELECTRIC LIGHTING & WIRING EQ.	0.08	0.09	0.10	0.11	0.12	0.12	8.25
56. RADIO, TV, & COMMUNICATION EQ.	2.04	2.34	2.57	2.79	2.94	3.00	8.08
57. ELECTRONIC COMPONENTS & ACCESS.	0.53	0.63	0.70	0.79	0.86	0.90	11.36
58. MISC. ELECTRICAL MACH. & EQ.	0.05	0.06	0.06	0.07	0.07	0.08	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.38	0.46	0.52	0.62	0.72	0.84	17.14
60. AIRCRAFT & PARTS	3.40	3.84	4.24	4.67	5.00	5.13	8.59
61. OTHER TRANSPORTATION EQ.	8.12	8.57	8.85	9.03	9.32	9.60	3.40
62. INSTRUMENTS & SUPPLIES	0.19	0.21	0.23	0.25	0.27	0.28	8.30
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.04	0.04	0.04	0.05	0.05	0.05	8.54
64. MISC. MANUFACTURING	0.04	0.04	0.04	0.05	0.05	0.05	4.11
65. TRANSPORTATION & WAREHOUSING	0.91	0.94	0.97	1.01	1.03	1.03	2.49
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.01	0.01	0.01	6.27
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.15
68. UTILITIES	0.69	0.75	0.81	0.86	0.91	0.92	6.02
69. WHOLESALE & RETAIL TRADE	0.57	0.65	0.73	0.81	0.88	0.93	10.27
70. FINANCE & INSURANCE	0.02	0.02	0.03	0.03	0.03	0.03	9.36
71. REAL ESTATE & RENTAL	0.40	0.44	0.47	0.51	0.54	0.56	6.79
72. PERSONAL SERVICES EXC. AUTO.	0.38	0.43	0.48	0.53	0.57	0.61	10.15
73. BUSINESS SERVICES	0.36	0.41	0.45	0.49	0.52	0.54	8.23
74. EATING & DRINKING PLACES	0.01	0.01	0.01	0.01	0.01	0.01	9.77
76. AMUSEMENTS	0.04	0.05	0.05	0.05	0.06	0.06	8.43
77. MISC. SERVICES	0.72	0.73	0.76	0.81	0.84	0.86	3.66
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	37.68	38.92	40.49	42.53	43.96	44.77	3.51
82. GOVERNMENT INDUSTRY	39.31	38.61	39.32	40.35	40.94	41.15	0.92
TOTAL, ALL INDUSTRIES	159.68	170.15	179.32	191.56	201.08	207.25	5.35

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
62. CONSTRUCTION CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	4.09	4.13	4.06	3.99	3.96	3.92	-0.82
2. OTHER AGRICULTURAL PRODUCTS	29.62	29.74	29.88	29.77	29.71	29.67	0.03
3. FORESTRY & FISHERY PRODUCTS	0.28	0.30	0.32	0.33	0.33	0.33	3.03
4. AGR. FORESTRY & FISHERY SERV.	0.76	0.78	0.79	0.81	0.82	0.83	1.76
5. IRON ORE MINING	2.22	2.39	2.56	2.54	2.49	2.44	1.89
6. NONFERROUS METAL MINING	2.51	2.66	2.77	2.85	2.84	2.87	2.73
7. COAL MINING	6.49	6.77	6.98	7.11	7.31	7.43	2.75
8. CRUDE PETROLEUM & N. GAS	1.71	1.71	1.71	1.68	1.65	1.67	-0.51
9. STONE & CLAY MINING & QUARRYING	0.78	0.80	0.83	0.86	0.88	0.89	2.61
10. CHEM & FERTILIZER MIN. MINING	0.88	0.90	0.93	0.95	0.96	0.97	2.02
11. NEW CONSTRUCTION	1,358.65	1,386.14	1,413.25	1,457.22	1,491.65	1,511.63	2.16
13. ORDNANCE & ACCESSORIES	8.14	8.34	8.50	8.71	8.84	8.95	1.91
14. FOOD & KINDRED PRODUCTS	7.57	7.69	7.76	7.75	7.69	7.64	0.19
16. FABRIC, YARN & THREAD MILLS	4.08	4.17	4.25	4.30	4.30	4.28	0.95
17. MISC. TEXTILE GOODS	1.10	1.14	1.19	1.23	1.25	1.26	2.74
19. MISC. FABRICATED TEXTILE PROD.	0.62	0.63	0.65	0.66	0.67	0.67	1.83
20. LUMBER & WOOD PRODUCTS	17.64	19.68	21.03	22.42	23.24	23.60	5.99
21. WOOD CONTAINERS	0.55	0.55	0.56	0.57	0.58	0.58	1.14
22. HOUSEHOLD FURNITURE	1.41	1.48	1.53	1.58	1.62	1.63	3.01
23. OTHER FURNITURE & FIXTURES	2.07	2.09	2.16	2.23	2.28	2.33	2.37
24. PAPER & ALLIED PRODUCTS	13.68	14.09	14.24	14.30	14.29	14.27	0.86
25. PAPERBOARD CONTAINERS & BOXES	0.95	0.98	1.00	1.02	1.03	1.04	1.72
26. PRINTING & PUBLISHING	2.92	2.94	2.96	2.99	3.00	3.01	0.61
27. CHEMICALS & PRODUCTS	15.08	15.39	15.65	15.83	15.95	16.06	1.27
28. PLASTICS & SYNTHETIC MATLS.	5.37	5.56	5.74	5.87	5.93	5.94	2.00
29. DRUGS, CLEANING & TOILET PREP.	4.02	4.05	4.11	4.17	4.17	4.18	0.81
30. PAINTS & ALLIED PRODUCTS	0.35	0.37	0.38	0.39	0.40	0.41	2.99
31. PET REFINING & REL. PROD.	6.76	6.75	6.79	6.85	6.86	6.86	0.30
32. RUBBER & MISC. PLASTICS PROD.	5.89	6.08	6.33	6.53	6.70	6.76	2.80
35. GLASS & GLASS PRODUCTS	3.21	3.26	3.31	3.33	3.31	3.28	0.42
36. STONE & CLAY PRODUCTS	9.36	9.55	9.72	9.96	10.01	9.89	1.10
37. PRIMARY FERROUS METALS	23.81	24.43	25.10	25.31	25.31	25.11	1.07
38. NONFERROUS METALS	9.39	9.78	10.23	10.58	10.80	11.00	3.23
39. METAL CONTAINERS	1.13	1.12	1.12	1.14	1.15	1.15	0.34
40. FAB. STRUCTURAL METAL PRODUCTS	11.67	11.65	11.90	12.26	12.48	12.60	1.56
41. SCREW MACHINE PROD. & STAMPINGS	4.28	4.50	4.64	4.72	4.74	4.76	2.16
42. OTHER FAB. METAL PRODUCTS	2.17	2.24	2.35	2.43	2.49	2.55	3.25
43. ENGINES & TURBINES	2.06	2.13	2.21	2.23	2.24	2.25	1.78
44. FARM & GARDEN MACHINERY	1.72	1.77	1.86	1.88	1.91	1.93	2.27

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
62. CONSTRUCTION CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO '87
45. CONSTR. & MINING MACHINERY	3.19	3.37	3.55	3.67	3.77	3.82	3.64
46. MATERIALS HANDLING MACH. & EQ.	1.14	1.18	1.25	1.30	1.33	1.36	3.62
47. METALWORKING MACH. & EQ.	2.92	3.04	3.22	3.35	3.45	3.51	3.76
48. SPECIAL INDUSTRY MACHINERY	1.96	2.00	2.10	2.20	2.25	2.30	3.21
49. GENERAL INDUSTRY MACHINERY	3.57	3.66	3.83	3.94	4.00	4.07	2.63
50. MISC. NONELECTRICAL MACH.	1.06	1.09	1.14	1.16	1.17	1.19	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	1.14	1.18	1.23	1.25	1.27	1.30	2.71
52. SERVICE INDUSTRY MACHINES	1.80	1.87	1.96	1.99	1.99	1.99	2.10
53. ELECTRICAL MACHINERY	3.02	3.07	3.20	3.28	3.31	3.33	1.98
55. ELECTRIC LIGHTING & WIRING EQ.	1.73	1.75	1.79	1.84	1.86	1.89	1.70
56. RADIO, TV, & COMMUNICATION EQ.	4.82	4.93	5.09	5.17	5.22	5.30	1.93
57. ELECTRONIC COMPONENTS & ACCESS.	2.40	2.50	2.62	2.73	2.81	2.87	3.64
58. MISC. ELECTRICAL MACH. & EQ.	1.79	1.85	1.93	1.95	1.97	1.99	2.12
59. MOTOR VEHICLES & EQUIPMENT	19.77	20.67	21.37	21.72	21.96	22.08	2.23
60. AIRCRAFT & PARTS	6.81	7.08	7.27	7.50	7.52	7.51	1.99
61. OTHER TRANSPORTATION EQ.	28.04	28.88	29.91	30.57	30.66	30.93	1.99
62. INSTRUMENTS & SUPPLIES	1.61	1.64	1.71	1.78	1.83	1.86	2.84
63. OPTICAL, OPHTHALMIC & PHD TO EQ.	0.81	0.82	0.86	0.90	0.92	0.95	3.18
64. MISC. MANUFACTURING	3.59	3.58	3.63	3.66	3.66	3.62	0.15
65. TRANSPORTATION & WAREHOUSING	21.41	21.50	21.55	21.67	21.40	21.00	-0.38
66. COMMUNICATION EXC. RADIO & TV	0.26	0.26	0.27	0.28	0.29	0.29	2.53
67. RADIO & TV BROADCASTING	0.35	0.36	0.37	0.37	0.38	0.38	1.71
68. UTILITIES	31.97	32.01	32.04	32.05	32.09	32.08	0.07
69. WHOLESALE & RETAIL TRADE	93.71	97.35	101.01	104.22	106.87	109.60	3.18
70. FINANCE & INSURANCE	2.48	2.52	2.57	2.64	2.71	2.78	2.28
71. REAL ESTATE & RENTAL	14.57	14.64	14.77	14.88	14.93	14.94	0.51
72. PERSONAL SERVICES EXC. AUTD.	20.50	21.20	22.00	22.80	23.61	24.36	3.51
73. BUSINESS SERVICES	7.51	7.72	7.95	8.23	8.47	8.65	2.86
74. EATING & DRINKING PLACES	0.37	0.38	0.38	0.38	0.39	0.39	1.07
76. AMUSEMENTS	4.23	4.29	4.41	4.51	4.62	4.73	2.24
77. MISC. SERVICES	111.24	112.24	113.56	115.69	118.22	121.09	1.71
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	652.79	664.62	677.29	694.65	708.15	717.31	1.90
82. GOVERNMENT INDUSTRY	268.22	266.64	268.01	271.03	274.12	277.86	0.71
TOTAL, ALL INDUSTRIES	2,916.47	2,969.36	3,025.93	3,103.51	3,163.82	3,204.73	1.90

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
63. ELECTRICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.08	0.09	0.10	0.11	0.11	0.12	7.88
6. NONFERROUS METAL MINING	0.09	0.11	0.12	0.13	0.14	0.15	11.26
7. COAL MINING	0.14	0.16	0.17	0.18	0.20	0.21	8.19
8. CRUDE PETROLEUM & N. GAS	0.05	0.06	0.06	0.06	0.07	0.07	4.44
9. STONE&CLAY MINING & QUARRYING	0.02	0.02	0.02	0.03	0.03	0.03	10.00
10. CHEM&FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.02	0.02	7.91
11. NEW CONSTRUCTION	8.28	9.34	10.02	11.05	11.87	12.44	8.49
13. ORDNANCE & ACCESSORIES	1.25	1.42	1.55	1.68	1.77	1.84	8.04
14. FOOD & KINDRED PRODUCTS	0.04	0.04	0.04	0.04	0.05	0.05	5.35
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.03	0.03	0.04	0.04	4.57
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	7.14
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.69
20. LUMBER & WOOD PRODUCTS	0.07	0.08	0.09	0.10	0.11	0.12	10.89
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.49
24. PAPER & ALLIED PRODUCTS	0.12	0.13	0.14	0.15	0.15	0.16	6.48
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.02	0.02	0.02	0.02	0.02	8.78
26. PRINTING & PUBLISHING	0.03	0.03	0.03	0.03	0.04	0.04	6.17
27. CHEMICALS & PRODUCTS	0.27	0.30	0.32	0.35	0.38	0.40	7.99
28. PLASTICS & SYNTHETIC MATLS.	0.06	0.07	0.08	0.09	0.09	0.09	8.04
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.22
31. PET REFINING & REL. PROD.	0.08	0.09	0.09	0.10	0.11	0.11	5.20
32. RUBBER & MISC. PLASTICS PROD.	0.09	0.10	0.11	0.13	0.14	0.15	10.26
35. GLASS & GLASS PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.04	8.17
36. STONE & CLAY PRODUCTS	0.08	0.09	0.10	0.11	0.11	0.12	6.87
37. PRIMARY FERROUS METALS	0.82	0.91	0.98	1.07	1.14	1.18	7.47
38. NONFERROUS METALS	0.46	0.53	0.59	0.65	0.70	0.74	9.86
39. METAL CONTAINERS	0.01	0.01	0.02	0.02	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.11	0.13	0.14	0.15	0.16	0.17	7.72
41. SCREW MACHINE PROD:&STAMPINGS	0.16	0.18	0.20	0.22	0.23	0.24	7.69
42. OTHER FAB. METAL PRODUCTS	0.05	0.06	0.07	0.08	0.08	0.09	9.94
43. ENGINES & TURBINES	0.08	0.09	0.10	0.10	0.11	0.11	7.71
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.04	0.04	0.05	0.05	0.05	9.12
47. METALWORKING MACH. & EQ.	0.09	0.10	0.11	0.12	0.13	0.14	9.35
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.06
49. GENERAL INDUSTRY MACHINERY	0.07	0.08	0.09	0.09	0.10	0.10	7.52
50. MISC. NONELECTRICAL MACH.	0.04	0.04	0.05	0.05	0.06	0.06	7.53

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
63. ELECTRICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
51. OFFICE, COMPUTING & ACCT. MACH.	0.03	0.03	0.03	0.04	0.04	0.04	7.31
52. SERVICE INDUSTRY MACHINES	0.01	0.02	0.02	0.02	0.02	0.03	13.37
53. ELECTRICAL MACHINERY	0.10	0.11	0.12	0.13	0.14	0.15	9.02
55. ELECTRIC LIGHTING & WIRING EQ.	0.05	0.06	0.06	0.07	0.07	0.07	8.24
56. RADIO, TV, & COMMUNICATION EQ.	1.22	1.40	1.54	1.67	1.76	1.80	8.08
57. ELECTRONIC COMPONENTS & ACCESS.	0.31	0.37	0.41	0.46	0.51	0.53	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.20	0.24	0.27	0.32	0.38	0.44	17.14
60. AIRCRAFT & PARTS	1.46	1.66	1.82	2.01	2.15	2.21	8.59
61. OTHER TRANSPORTATION EQ.	2.60	2.75	2.83	2.89	2.98	3.08	3.40
62. INSTRUMENTS & SUPPLIES	0.10	0.12	0.13	0.14	0.15	0.16	8.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.02	0.02	0.02	0.02	0.02	8.50
64. MISC. MANUFACTURING	0.02	0.02	0.02	0.02	0.02	0.02	4.35
65. TRANSPORTATION & WAREHOUSING	0.45	0.47	0.48	0.50	0.51	0.51	2.41
68. UTILITIES	0.36	0.39	0.42	0.45	0.48	0.48	6.18
69. WHOLESALE & RETAIL TRADE	0.02	0.03	0.03	0.03	0.03	0.04	9.01
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.01	0.01	9.31
71. REAL ESTATE & RENTAL	0.01	0.01	0.02	0.02	0.02	0.02	6.94
72. PERSONAL SERVICES EXC. AUTO.	0.15	0.17	0.19	0.21	0.22	0.24	10.50
73. BUSINESS SERVICES	0.10	0.11	0.12	0.13	0.14	0.15	8.22
76. AMUSEMENTS	0.02	0.02	0.02	0.02	0.03	0.03	8.82
77. MISC. SERVICES	0.13	0.13	0.13	0.14	0.15	0.15	3.53
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.55	3.68	3.84	4.04	4.17	4.24	3.64
82. GOVERNMENT INDUSTRY	11.21	11.02	11.27	11.61	11.84	11.95	1.29
TOTAL, ALL INDUSTRIES	35.02	37.35	39.48	42.16	44.26	45.63	5.43
TOTAL EMPLOYMENT							
5. IRON ORE MINING	1.58	1.70	1.82	1.80	1.76	1.72	1.72
6. NONFERROUS METAL MINING	1.56	1.65	1.72	1.77	1.76	1.78	2.66
7. COAL MINING	4.97	5.18	5.32	5.41	5.55	5.64	2.54
8. CRUDE PETROLEUM & N. GAS	0.72	0.72	0.72	0.71	0.70	0.71	-0.35
9. STONE & CLAY MINING & QUARRYING	0.61	0.62	0.64	0.67	0.68	0.69	2.59
10. CHEM & FERTILIZER MIN. MINING	0.55	0.56	0.58	0.59	0.60	0.60	2.01
11. NEW CONSTRUCTION	220.21	224.47	228.67	235.60	240.98	244.03	2.08
13. ORDNANCE & ACCESSORIES	2.07	2.12	2.16	2.22	2.25	2.28	1.93
14. FOOD & KINDRED PRODUCTS	5.47	5.56	5.61	5.60	5.56	5.53	0.22
16. FABRIC, YARN & THREAD MILLS	2.34	2.40	2.45	2.49	2.50	2.49	1.19
17. MISC. TEXTILE GOODS	0.61	0.63	0.66	0.68	0.69	0.70	2.74



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
63. ELECTRICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
19. MISC. FABRICATED TEXTILE PROD.	0.28	0.29	0.29	0.30	0.30	0.31	1.86
20. LUMBER & WOOD PRODUCTS	3.44	3.80	4.02	4.24	4.36	4.39	4.97
23. OTHER FURNITURE & FIXTURES	0.40	0.41	0.42	0.43	0.44	0.45	2.07
24. PAPER & ALLIED PRODUCTS	6.23	6.41	6.46	6.48	6.46	6.44	0.66
25. PAPERBOARD CONTAINERS & BOXES	0.62	0.63	0.65	0.66	0.67	0.67	1.72
26. PRINTING & PUBLISHING	1.72	1.73	1.74	1.75	1.76	1.77	0.55
27. CHEMICALS & PRODUCTS	5.59	5.72	5.83	5.90	5.96	6.01	1.45
28. PLASTICS & SYNTHETIC MATLS.	2.64	2.72	2.80	2.86	2.88	2.87	1.68
30. PAINTS & ALLIED PRODUCTS	0.18	0.18	0.19	0.20	0.20	0.20	2.99
31. PET REFINING & REL. PROD.	1.56	1.56	1.57	1.58	1.58	1.58	0.26
32. RUBBER & MISC. PLASTICS PROD.	3.32	3.44	3.58	3.69	3.79	3.82	2.83
35. GLASS & GLASS PRODUCTS	1.13	1.13	1.14	1.14	1.12	1.10	-0.45
36. STONE & CLAY PRODUCTS	2.56	2.58	2.59	2.62	2.60	2.53	-0.27
37. PRIMARY FERROUS METALS	11.57	11.88	12.21	12.32	12.33	12.24	1.13
38. NONFERROUS METALS	5.47	5.70	5.96	6.16	6.29	6.41	3.23
39. METAL CONTAINERS	0.94	0.92	0.92	0.94	0.95	0.95	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	2.57	2.58	2.65	2.74	2.80	2.84	1.98
41. SCREW MACHINE PROD.&STAMPINGS	2.68	2.81	2.90	2.95	2.97	2.98	2.16
42. OTHER FAB. METAL PRODUCTS	1.19	1.22	1.28	1.32	1.36	1.39	3.23
43. ENGINES & TURBINES	0.93	0.96	1.00	1.01	1.01	1.02	1.78
45. CONSTR. & MINING MACHINERY	1.61	1.71	1.80	1.86	1.91	1.93	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.58	0.60	0.63	0.66	0.68	0.69	3.62
47. METALWORKING MACH. & EQ.	1.73	1.80	1.90	1.98	2.04	2.08	3.75
48. SPECIAL INDUSTRY MACHINERY	0.92	0.94	0.99	1.03	1.06	1.08	3.22
49. GENERAL INDUSTRY MACHINERY	1.65	1.69	1.77	1.81	1.84	1.87	2.62
50. MISC. NONELECTRICAL MACH.	0.36	0.37	0.38	0.39	0.40	0.40	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	0.74	0.77	0.80	0.82	0.83	0.85	2.71
52. SERVICE INDUSTRY MACHINES	0.82	0.85	0.89	0.90	0.91	0.91	2.10
53. ELECTRICAL MACHINERY	1.96	1.99	2.08	2.12	2.14	2.16	1.97
55. ELECTRIC LIGHTING & WIRING EQ.	1.03	1.04	1.06	1.09	1.11	1.12	1.70
56. RADIO, TV, & COMMUNICATION EQ.	2.89	2.96	3.05	3.10	3.13	3.18	1.93
57. ELECTRONIC COMPONENTS & ACCESS.	1.41	1.47	1.54	1.61	1.65	1.69	3.65
58. MISC. ELECTRICAL MACH. & EQ.	1.16	1.20	1.25	1.26	1.28	1.29	2.12
59. MOTOR VEHICLES & EQUIPMENT	10.30	10.76	11.13	11.31	11.43	11.50	2.23
60. AIRCRAFT & PARTS	2.93	3.05	3.13	3.23	3.24	3.24	1.99
61. OTHER TRANSPORTATION EQ.	8.98	9.25	9.58	9.80	9.82	9.91	1.99
62. INSTRUMENTS & SUPPLIES	0.90	0.92	0.95	0.99	1.02	1.04	2.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.34	0.35	0.36	0.38	0.39	0.40	3.14
64. MISC. MANUFACTURING	1.61	1.61	1.64	1.66	1.66	1.65	0.38

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
63. ELECTRICIANS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
65. TRANSPORTATION & WAREHOUSING	10.59	10.63	10.65	10.70	10.56	10.35	-0.46
68. UTILITIES	16.68	16.73	16.77	16.80	16.85	16.87	0.22
69. WHOLESALE & RETAIL TRAOE	3.86	3.96	4.06	4.14	4.20	4.26	2.01
70. FINANCE & INSURANCE	0.76	0.77	0.79	0.81	0.83	0.85	2.23
71. REAL ESTATE & RENTAL	0.49	0.49	0.49	0.50	0.50	0.50	0.65
72. PERSONAL SERVICES EXC. AUTO.	7.93	8.23	8.57	8.91	9.25	9.57	3.84
73. BUSINESS SERVICES	2.04	2.10	2.16	2.23	2.30	2.35	2.85
76. AMUSEMENTS	1.82	1.85	1.91	1.96	2.01	2.07	2.61
77. MISC. SERVICES	19.43	19.58	19.79	20.13	20.55	21.02	1.59
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	48.65	49.57	50.56	51.75	52.63	53.19	1.80
82. GOVERNMENT INDUSTRY	46.95	46.85	47.29	48.07	48.86	49.61	1.11
TOTAL, ALL INOUSTRIES	506.05	515.70	526.00	538.37	547.48	553.31	1.80

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
84. FITTERS, PIPELAYING  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.02	0.02	0.02	0.02	0.02	0.02	4.10
11. NEW CONSTRUCTION	0.26	0.30	0.32	0.35	0.38	0.40	8.37
82. GOVERNMENT INDUSTRY	9.35	9.15	9.20	9.31	9.29	9.20	-0.33
TOTAL, ALL INDUSTRIES	9.63	9.46	9.53	9.68	9.69	9.61	-0.04
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.21	0.21	0.21	0.20	0.20	0.20	-0.68
11. NEW CONSTRUCTION	7.04	7.17	7.29	7.51	7.67	7.76	1.96
82. GOVERNMENT INDUSTRY	5.60	5.47	5.49	5.55	5.53	5.46	-0.50
TOTAL, ALL INDUSTRIES	12.85	12.84	12.99	13.25	13.40	13.42	0.88

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
65. PLUMBERS&PIPEFITTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.02	0.03	0.03	0.03	0.04	0.04	11.76
8. CRUDE PETROLEUM & N. GAS	0.02	0.02	0.02	0.03	0.03	0.03	4.07
11. NEW CONSTRUCTION	8.78	7.85	8.24	9.12	9.83	10.33	8.86
13. ORONANCE & ACCESSORIES	0.87	0.99	1.07	1.16	1.22	1.27	7.84
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.36
16. FABRIC,YARN & THREAO MILLS	0.00	0.01	0.01	0.01	0.01	0.01	4.10
20. LUMBER & WOOD PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.05	13.18
24. PAPER & ALLIEO PRODUCTS	0.08	0.08	0.10	0.11	0.11	0.12	6.89
27. CHEMICALS & PROOUCTS	0.24	0.27	0.28	0.31	0.33	0.35	7.61
28. PLASTICS & SYNTHETIC MATLS.	0.04	0.05	0.05	0.06	0.06	0.06	8.70
31. PET REFINING & REL. PROO.	0.17	0.18	0.19	0.20	0.21	0.21	5.26
32. RUBBER & MISC. PLASTICS PROO.	0.04	0.04	0.04	0.05	0.05	0.06	9.98
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.25
36. STONE & CLAY PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	8.10
37. PRIMARY FERROUS METALS	0.26	0.29	0.31	0.33	0.35	0.36	7.03
38. NONFERROUS METALS	0.13	0.15	0.17	0.19	0.20	0.21	9.94
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.05	0.05	0.05	0.05	0.06	7.64
41. SCREW MACHINE PROO.&STAMPINGS	0.05	0.06	0.06	0.07	0.07	0.08	7.70
42. OTHER FAB. METAL PRODUCTS	0.02	0.03	0.03	0.03	0.04	0.04	10.09
43. ENGINES & TURBINES	0.05	0.06	0.07	0.07	0.07	0.08	7.72
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.02	0.02	0.02	0.02	0.02	9.12
47. METALWORKING MACH. & EQ.	0.02	0.03	0.03	0.03	0.04	0.04	9.37
49. GENERAL INDOUSTRY MACHINERY	0.04	0.04	0.04	0.05	0.05	0.05	7.52
50. MISC. NONELECTRICAL MACH.	0.02	0.03	0.03	0.03	0.03	0.04	7.54
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.01	13.38
53. ELECTRICAL MACHINERY	0.02	0.03	0.03	0.03	0.03	0.03	9.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.02	0.02	0.02	0.02	0.02	8.24
56. RAOIO,TV, & COMMUNICATION EQ.	0.35	0.40	0.44	0.48	0.51	0.52	8.09
57. ELECTRONIC COMPONENTS & ACCESS.	0.11	0.13	0.15	0.17	0.18	0.19	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.02	0.02	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.12	0.15	0.17	0.20	0.23	0.27	17.14
60. AIRCRAFT & PARTS	0.65	0.74	0.81	0.90	0.96	0.98	8.59
61. OTHER TRANSPORTATION EQ.	2.76	2.91	3.00	3.07	3.16	3.26	3.41
62. INSTRUMENTS & SUPPLIES	0.03	0.03	0.03	0.04	0.04	0.04	8.23
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.56
65. TRANSPORTATION & WAREHOUSING	0.10	0.10	0.10	0.11	0.11	0.11	2.46

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
65. PLUMBERS&PIPEFITTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	0.26	0.29	0.31	0.33	0.35	0.35	5.77
69. WHOLESALE & RETAIL TRADE	0.04	0.05	0.05	0.06	0.06	0.06	9.43
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	7.04
72. PERSONAL SERVICES EXC. AUTO.	0.07	0.08	0.09	0.10	0.11	0.12	11.70
73. BUSINESS SERVICES	0.05	0.05	0.06	0.06	0.07	0.07	8.13
77. MISC. SERVICES	0.09	0.09	0.09	0.10	0.10	0.11	3.79
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.75	2.90	3.04	3.21	3.34	3.41	4.43
82. GOVERNMENT INDUSTRY	1.84	1.81	1.85	1.90	1.93	1.95	1.10
TOTAL, ALL INDUSTRIES	18.32	20.00	21.29	22.92	24.26	25.19	6.57

## TOTAL EMPLOYMENT

6. NONFERROUS METAL MINING	0.39	0.41	0.43	0.45	0.45	0.45	3.12
8. CRUDE PETROLEUM & N. GAS	0.30	0.30	0.30	0.29	0.29	0.29	-0.70
11. NEW CONSTRUCTION	179.77	183.92	188.02	194.37	199.45	202.59	2.42
13. ORNANCE & ACCESSORIES	1.44	1.47	1.50	1.53	1.55	1.57	1.74
14. FOOD & KINDRED PRODUCTS	0.94	0.95	0.96	0.96	0.95	0.95	0.23
16. FABRIC, YARN & THREAD MILLS	0.40	0.41	0.41	0.42	0.42	0.41	0.74
20. LUMBER & WOOD PRODUCTS	1.24	1.40	1.51	1.63	1.71	1.75	7.14
24. PAPER & ALLIED PRODUCTS	4.56	4.70	4.76	4.79	4.80	4.80	1.05
27. CHEMICALS & PRODUCTS	5.00	5.09	5.17	5.22	5.25	5.28	1.09
28. PLASTICS & SYNTHETIC MATLS.	1.71	1.77	1.84	1.88	1.91	1.92	2.31
31. PET REFINING & REL. PROD.	3.09	3.08	3.10	3.13	3.14	3.13	0.32
32. RUBBER & MISC. PLASTICS PROD.	1.32	1.36	1.41	1.45	1.48	1.49	2.57
35. GLASS & GLASS PRODUCTS	0.40	0.40	0.40	0.40	0.40	0.39	-0.37
36. STONE & CLAY PRODUCTS	0.43	0.44	0.44	0.45	0.45	0.45	0.88
37. PRIMARY FERROUS METALS	3.64	3.72	3.81	3.82	3.81	3.77	0.71
38. NONFERROUS METALS	1.57	1.64	1.71	1.77	1.81	1.85	3.31
40. FAB. STRUCTURAL METAL PRODUCTS	0.90	0.90	0.92	0.95	0.97	0.99	1.91
41. SCREW MACHINE PROD. & STAMPINGS	0.85	0.90	0.93	0.94	0.95	0.95	2.17
42. OTHER FAB. METAL PRODUCTS	0.52	0.54	0.57	0.59	0.60	0.62	3.36
43. ENGINES & TURBINES	0.64	0.66	0.68	0.69	0.69	0.70	1.78
45. CONSTR. & MINING MACHINERY	0.67	0.71	0.75	0.78	0.80	0.80	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.24	0.25	0.26	0.27	0.28	0.29	3.63
47. METALWORKING MACH. & EQ.	0.48	0.50	0.53	0.55	0.57	0.58	3.77
49. GENERAL INDUSTRY MACHINERY	0.81	0.83	0.86	0.89	0.90	0.92	2.63
50. MISC. NONELECTRICAL MACH.	0.21	0.22	0.23	0.23	0.24	0.24	2.23
52. SERVICE INDUSTRY MACHINES	0.40	0.41	0.43	0.44	0.44	0.44	2.12
53. ELECTRICAL MACHINERY	0.45	0.46	0.48	0.49	0.49	0.50	2.00

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
65. PLUMBERS&PIPEFITTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
55. ELECTRIC LIGHTING & WIRING EQ.	0.28	0.28	0.29	0.30	0.30	0.30	1.69
56. RADIO, TV, & COMMUNICATION EQ.	0.83	0.85	0.87	0.89	0.90	0.91	1.94
57. ELECTRONIC COMPONENTS & ACCESS.	0.52	0.54	0.56	0.59	0.60	0.62	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.39	0.40	0.42	0.42	0.43	0.43	2.12
59. MOTOR VEHICLES & EQUIPMENT	6.40	6.69	6.92	7.03	7.11	7.15	2.23
60. AIRCRAFT & PARTS	1.31	1.36	1.40	1.44	1.44	1.44	1.99
61. OTHER TRANSPORTATION EQ.	9.52	9.81	10.16	10.38	10.41	10.51	2.00
62. INSTRUMENTS & SUPPLIES	0.24	0.25	0.26	0.27	0.27	0.28	2.77
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.21	0.22	0.23	0.24	0.24	0.25	3.20
65. TRANSPORTATION & WAREHOUSING	2.26	2.27	2.27	2.29	2.26	2.21	-0.41
68. UTILITIES	12.29	12.28	12.25	12.23	12.22	12.19	-0.16
69. WHOLESALE & RETAIL TRADE	6.70	6.90	7.10	7.27	7.41	7.54	2.40
71. REAL ESTATE & RENTAL	0.31	0.31	0.32	0.32	0.32	0.32	0.74
72. PERSONAL SERVICES EXC. AUTO.	3.72	3.81	4.12	4.33	4.54	4.74	4.97
73. BUSINESS SERVICES	0.98	1.00	1.03	1.07	1.10	1.12	2.76
77. MISC. SERVICES	13.69	13.83	14.01	14.29	14.63	15.00	1.64
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	55.31	56.46	57.84	59.17	60.34	61.14	2.03
82. GOVERNMENT INDUSTRY	20.05	19.83	19.83	19.94	20.05	20.26	0.21
TOTAL, ALL INDUSTRIES	356.21	363.60	371.23	381.03	388.58	393.77	2.03

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY. NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
66. REFRACTORY MATERIALS REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
36. STONE & CLAY PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	7.35
37. PRIMARY FERROUS METALS	0.29	0.33	0.35	0.38	0.41	0.43	7.64
38. NONFERROUS METALS	0.08	0.09	0.10	0.11	0.12	0.12	9.80
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.44
41. SCREW MACHINE PROD.&STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.01	7.62
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.53
TOTAL, ALL INDUSTRIES	0.42	0.47	0.51	0.56	0.60	0.62	8.04
TOTAL EMPLOYMENT							
36. STONE & CLAY PRODUCTS	0.62	0.62	0.63	0.64	0.64	0.62	0.18
37. PRIMARY FERROUS METALS	4.14	4.28	4.38	4.43	4.44	4.41	1.28
38. NONFERROUS METALS	0.90	0.94	0.98	1.01	1.04	1.05	3.18
40. FAB. STRUCTURAL METAL PRODUCTS	0.18	0.18	0.18	0.19	0.20	0.20	2.67
41. SCREW MACHINE PROD.&STAMPINGS	0.13	0.13	0.14	0.14	0.14	0.14	2.09
49. GENERAL INDUSTRY MACHINERY	0.16	0.16	0.17	0.17	0.18	0.18	2.84
TOTAL, ALL INDUSTRIES	6.36	6.54	6.74	6.84	6.88	6.87	1.56

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
67. SHIPWRIGHTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
61. OTHER TRANSPORTATION EQ.	0.40	0.42	0.43	0.44	0.46	0.47	3.43
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.03	0.03	0.03	2.15
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.43	0.43	0.44	0.46	0.46	0.47	1.53
82. GOVERNMENT INDUSTRY	0.78	0.77	0.78	0.80	0.81	0.82	0.87
TOTAL, ALL INDUSTRIES	1.65	1.66	1.70	1.74	1.78	1.80	1.74
TOTAL EMPLOYMENT							
61. OTHER TRANSPORTATION EQ.	1.38	1.42	1.47	1.50	1.51	1.52	2.02
65. TRANSPORTATION & WAREHOUSING	0.70	0.70	0.70	0.70	0.69	0.67	-0.70
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.17	1.18	1.20	1.22	1.23	1.24	1.23
82. GOVERNMENT INDUSTRY	1.35	1.34	1.36	1.38	1.41	1.43	1.21
TOTAL, ALL INDUSTRIES	4.76	4.82	4.91	5.00	5.03	5.06	1.23

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
68. STRUCTURAL STEEL WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
11. NEW CONSTRUCTION	1.81	2.04	2.18	2.40	2.57	2.69	8.24
13. ORDNANCE & ACCESSORIES	0.04	0.05	0.05	0.06	0.06	0.06	7.70
27. CHEMICALS & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.04
37. PRIMARY FERROUS METALS	0.07	0.08	0.08	0.09	0.09	0.10	7.12
38. NONFERROUS METALS	0.01	0.01	0.01	0.01	0.01	0.02	9.55
40. FAB. STRUCTURAL METAL PRODUCTS	0.16	0.18	0.19	0.20	0.21	0.22	6.96
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.75
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.13
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.53
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.01	0.01	0.01	11.29
60. AIRCRAFT & PARTS	0.25	0.28	0.31	0.34	0.36	0.37	8.59
61. OTHER TRANSPORTATION EQ.	0.24	0.25	0.26	0.26	0.27	0.28	2.93
65. TRANSPORTATION & WAREHOUSING	0.01	0.01	0.01	0.01	0.01	0.01	3.44
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	3.22
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.04	0.05	0.05	0.05	5.40
TOTAL, ALL INDUSTRIES	2.72	3.04	3.26	3.55	3.79	3.94	7.70
TOTAL EMPLOYMENT							
11. NEW CONSTRUCTION	48.16	48.97	49.77	51.15	52.21	52.75	1.84
13. ORDNANCE & ACCESSORIES	0.07	0.07	0.07	0.07	0.07	0.08	1.61
27. CHEMICALS & PRODUCTS	0.18	0.19	0.19	0.19	0.19	0.20	1.50
37. PRIMARY FERROUS METALS	0.97	0.99	1.02	1.02	1.02	1.01	0.79
38. NONFERROUS METALS	0.11	0.12	0.12	0.13	0.13	0.13	2.94
40. FAB. STRUCTURAL METAL PRODUCTS	3.54	3.53	3.59	3.69	3.74	3.77	1.26
43. ENGINES & TURBINES	0.09	0.09	0.10	0.10	0.10	0.10	1.81
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.12	0.13	0.13	0.14	0.14	3.63
49. GENERAL INDUSTRY MACHINERY	0.16	0.16	0.17	0.17	0.18	0.18	2.64
57. ELECTRONIC COMPONENTS & ACCESS.	0.03	0.03	0.04	0.04	0.04	0.04	3.58
60. AIRCRAFT & PARTS	0.50	0.52	0.53	0.55	0.55	0.55	1.99
61. OTHER TRANSPORTATION EQ.	0.82	0.84	0.87	0.89	0.88	0.89	1.53
65. TRANSPORTATION & WAREHOUSING	0.20	0.20	0.21	0.21	0.21	0.21	0.55
77. MISC. SERVICES	1.19	1.19	1.20	1.22	1.24	1.26	1.29
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.13	1.15	1.17	1.20	1.22	1.23	1.76
TOTAL, ALL INDUSTRIES	62.12	63.09	64.18	65.87	67.10	67.79	1.76

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE

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BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
69. CONSTRUCTION CRAFTS WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	2.59
2. OTHER AGRICULTURAL PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	2.77
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.03
4. AGR. FORESTRY & FISHERY SERV.	0.01	0.01	0.01	0.01	0.01	0.01	6.85
5. IRON ORE MINING	0.03	0.03	0.03	0.04	0.04	0.04	8.52
6. NONFERROUS METAL MINING	0.03	0.04	0.04	0.05	0.05	0.06	11.24
7. COAL MINING	0.04	0.04	0.05	0.05	0.05	0.06	9.12
8. CRUDE PETROLEUM & N. GAS	0.03	0.04	0.04	0.04	0.04	0.04	4.23
11. NEW CONSTRUCTION	33.95	38.35	41.19	45.44	48.84	51.20	8.56
13. ORNANCE & ACCESSORIES	2.75	3.12	3.41	3.69	3.90	4.06	8.08
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.18
16. FABRIC, YARN & THREAD MILLS	0.02	0.02	0.02	0.02	0.02	0.02	3.95
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.60
20. LUMBER & WOOD PRODUCTS	0.27	0.31	0.35	0.39	0.44	0.47	12.13
21. WOOD CONTAINERS	0.03	0.03	0.04	0.04	0.04	0.05	9.78
23. OTHER FURNITURE & FIXTURES	0.03	0.03	0.03	0.03	0.03	0.03	4.90
24. PAPER & ALLIED PRODUCTS	0.05	0.06	0.06	0.07	0.07	0.07	6.86
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.77
26. PRINTING & PUBLISHING	0.01	0.01	0.02	0.02	0.02	0.02	6.39
27. CHEMICALS & PRODUCTS	0.21	0.23	0.25	0.27	0.29	0.30	7.76
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.03	0.03	0.03	0.04	0.04	8.71
31. PET REFINING & REL. PROD.	0.11	0.12	0.13	0.13	0.14	0.15	5.22
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.04	0.04	0.05	0.05	0.06	10.42
35. GLASS & GLASS PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.06	9.99
36. STONE & CLAY PRODUCTS	0.19	0.21	0.23	0.25	0.27	0.29	9.09
37. PRIMARY FERROUS METALS	0.25	0.28	0.30	0.32	0.34	0.36	7.44
38. NONFERROUS METALS	0.11	0.13	0.14	0.16	0.17	0.18	9.80
40. FAB. STRUCTURAL METAL PRODUCTS	0.20	0.22	0.24	0.25	0.27	0.28	7.14
41. SCREW MACHINE PROD. & STAMPINGS	0.04	0.04	0.04	0.05	0.05	0.05	7.68
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	9.80
43. ENGINES & TURBINES	0.03	0.04	0.04	0.04	0.05	0.05	7.75
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.12
47. METALWORKING MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.39
49. GENERAL INDUSTRY MACHINERY	0.04	0.04	0.04	0.05	0.05	0.05	7.52
50. MISC. NONELECTRICAL MACH.	0.05	0.06	0.06	0.07	0.07	0.07	7.52
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.02	0.02	7.32

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
 OCCUPATION BY INDUSTRY MODEL  
 ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
 69. CONSTRUCTION CRAFTS WORKERS, NEC  
 (THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.02	0.02	13.38
53. ELECTRICAL MACHINERY	0.03	0.03	0.04	0.04	0.04	0.04	9.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.02	0.02	0.02	0.03	0.03	8.27
56. RADIO, TV, & COMMUNICATION EQ.	0.47	0.54	0.59	0.64	0.67	0.69	8.08
57. ELECTRONIC COMPONENTS & ACCESS.	0.10	0.11	0.13	0.14	0.16	0.16	11.32
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.06	0.07	0.08	0.09	0.11	0.13	17.14
60. AIRCRAFT & PARTS	1.03	1.16	1.28	1.42	1.51	1.55	8.59
61. OTHER TRANSPORTATION EQ.	2.13	2.24	2.32	2.36	2.44	2.52	3.43
62. INSTRUMENTS & SUPPLIES	0.05	0.06	0.07	0.07	0.08	0.08	8.27
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.02	0.02	8.58
64. MISC. MANUFACTURING	0.02	0.02	0.02	0.02	0.02	0.02	3.73
65. TRANSPORTATION & WAREHOUSING	0.33	0.34	0.35	0.36	0.37	0.37	2.60
68. UTILITIES	0.06	0.07	0.07	0.08	0.08	0.08	6.16
69. WHOLESALE & RETAIL TRADE	0.50	0.57	0.64	0.71	0.78	0.82	10.40
70. FINANCE & INSURANCE	0.01	0.01	0.02	0.02	0.02	0.02	9.39
71. REAL ESTATE & RENTAL	0.38	0.41	0.45	0.48	0.51	0.52	6.76
72. PERSONAL SERVICES EXC. AUTO.	0.16	0.18	0.20	0.22	0.24	0.25	9.10
73. BUSINESS SERVICES	0.21	0.24	0.26	0.29	0.30	0.32	8.26
76. AMUSEMENTS	0.02	0.02	0.03	0.03	0.03	0.03	8.14
77. MISC. SERVICES	0.50	0.51	0.53	0.56	0.58	0.59	3.67
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	25.71	26.56	27.64	29.11	30.18	30.82	3.69
82. GOVERNMENT INDUSTRY	16.13	15.87	16.23	16.73	17.06	17.23	1.34
TOTAL, ALL INDUSTRIES	86.70	92.86	98.07	105.30	110.95	114.68	5.75
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	3.11	3.14	3.09	3.03	3.01	2.99	-0.81
2. OTHER AGRICULTURAL PRODUCTS	22.53	22.62	22.72	22.65	22.60	22.56	0.03
3. FORESTRY & FISHERY PRODUCTS	0.26	0.27	0.29	0.30	0.30	0.30	3.07
4. AGR., FORESTRY, & FISHERY SERV.	0.47	0.49	0.49	0.50	0.51	0.52	1.76
5. IRON ORE MINING	0.53	0.57	0.61	0.61	0.60	0.59	2.33
6. NONFERROUS METAL MINING	0.56	0.60	0.62	0.64	0.64	0.64	2.65
7. COAL MINING	1.32	1.38	1.44	1.47	1.52	1.56	3.42
8. CRUDE PETROLEUM & N. GAS	0.46	0.46	0.46	0.45	0.44	0.45	-0.56
11. NEW CONSTRUCTION	903.47	921.61	939.50	968.60	991.34	1,004.50	2.14
13. ORNANCE & ACCESSORIES	4.55	4.67	4.76	4.88	4.95	5.02	1.96
14. FOOD & KINDRED PRODUCTS	1.17	1.18	1.19	1.19	1.18	1.17	0.05
16. FABRIC, YARN & THREAD MILLS	1.33	1.35	1.38	1.39	1.38	1.37	0.60

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
69. CONSTRUCTION CRAFTS WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH
							82 TO 87
19. MISC. FABRICATED TEXTILE PROD.	0.23	0.23	0.24	0.24	0.25	0.25	1.78
20. LUMBER & WOOD PRODUCTS	12.96	14.48	15.49	16.54	17.17	17.46	6.15
21. WOOD CONTAINERS	0.49	0.49	0.50	0.51	0.52	0.52	1.12
23. OTHER FURNITURE & FIXTURES	1.58	1.60	1.66	1.71	1.75	1.79	2.48
24. PAPER & ALLIED PRODUCTS	2.83	2.92	2.96	2.98	2.98	2.98	1.02
25. PAPERBOARD CONTAINERS & BOXES	0.32	0.32	0.33	0.34	0.34	0.34	1.71
26. PRINTING & PUBLISHING	0.85	0.85	0.86	0.87	0.88	0.88	0.76
27. CHEMICALS & PRODUCTS	4.30	4.39	4.46	4.51	4.55	4.57	1.23
28. PLASTICS & SYNTHETIC MATLS.	1.01	1.04	1.08	1.11	1.12	1.13	2.31
31. PET REFINING & REL. PROD.	2.10	2.09	2.11	2.12	2.13	2.13	0.28
32. RUBBER & MISC. PLASTICS PROD.	1.24	1.28	1.33	1.38	1.42	1.43	2.99
35. GLASS & GLASS PRODUCTS	1.59	1.63	1.67	1.70	1.70	1.70	1.23
36. STONE & CLAY PRODUCTS	5.73	5.89	6.03	6.23	6.30	6.27	1.80
37. PRIMARY FERROUS METALS	3.49	3.58	3.68	3.71	3.71	3.68	1.09
38. NONFERROUS METALS	1.33	1.39	1.45	1.50	1.53	1.56	3.18
40. FAB. STRUCTURAL METAL PRODUCTS	4.48	4.47	4.56	4.69	4.77	4.81	1.43
41. SCREW MACHINE PROD. & STAMPINGS	0.60	0.63	0.65	0.67	0.67	0.67	2.15
42. OTHER FAB. METAL PRODUCTS	0.33	0.34	0.35	0.36	0.37	0.38	3.10
43. ENGINES & TURBINES	0.40	0.41	0.43	0.43	0.43	0.44	1.81
45. CONSTR. & MINING MACHINERY	0.56	0.60	0.63	0.65	0.67	0.67	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.20	0.21	0.22	0.23	0.24	0.24	3.62
47. METALWORKING MACH. & EQ.	0.61	0.63	0.67	0.69	0.72	0.73	3.79
49. GENERAL INDUSTRY MACHINERY	0.80	0.82	0.86	0.89	0.90	0.92	2.63
50. MISC. NONELECTRICAL MACH.	0.45	0.46	0.48	0.49	0.49	0.50	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	0.29	0.30	0.31	0.32	0.32	0.33	2.73
52. SERVICE INDUSTRY MACHINES	0.51	0.53	0.56	0.57	0.57	0.57	2.12
53. ELECTRICAL MACHINERY	0.57	0.58	0.60	0.61	0.62	0.63	2.00
55. ELECTRIC LIGHTING & WIRING EQ.	0.39	0.40	0.41	0.42	0.42	0.43	1.72
56. RADIO, TV, & COMMUNICATION EQ.	1.10	1.13	1.16	1.18	1.19	1.21	1.93
57. ELECTRONIC COMPONENTS & ACCESS.	0.44	0.46	0.48	0.50	0.51	0.52	3.61
58. MISC. ELECTRICAL MACH. & EQ.	0.23	0.24	0.25	0.25	0.26	0.26	2.13
59. MOTOR VEHICLES & EQUIPMENT	3.01	3.15	3.25	3.31	3.34	3.36	2.23
60. AIRCRAFT & PARTS	2.06	2.14	2.20	2.27	2.28	2.28	1.99
61. OTHER TRANSPORTATION EQ.	7.33	7.56	7.83	8.00	8.03	8.10	2.01
62. INSTRUMENTS & SUPPLIES	0.47	0.48	0.50	0.52	0.53	0.54	2.81
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.25	0.26	0.27	0.28	0.29	0.30	3.21
64. MISC. MANUFACTURING	1.85	1.83	1.85	1.86	1.85	1.83	-0.22
65. TRANSPORTATION & WAREHOUSING	7.65	7.69	7.72	7.77	7.69	7.55	-0.27
68. UTILITIES	2.77	2.78	2.79	2.79	2.80	2.80	0.21

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
69. CONSTRUCTION CRAFTS WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	82.14	85.45	88.77	91.70	94.14	96.65	3.31
70. FINANCE & INSURANCE	1.51	1.54	1.57	1.61	1.66	1.70	2.31
71. REAL ESTATE & RENTAL	13.71	13.77	13.89	13.99	14.04	14.04	0.48
72. PERSONAL SERVICES EXC. AUTO.	8.76	8.96	9.20	9.45	9.69	9.92	2.52
73. BUSINESS SERVICES	4.38	4.50	4.64	4.80	4.94	5.05	2.89
76. AMUSEMENTS	2.32	2.34	2.40	2.45	2.50	2.55	1.98
77. MISC. SERVICES	76.93	77.64	78.56	80.04	81.81	83.81	1.73
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	539.33	548.72	558.77	573.33	584.87	592.87	1.91
82. GOVERNMENT INDUSTRY	183.07	181.64	182.18	183.71	185.31	187.67	0.50
TOTAL, ALL INDUSTRIES	1,951.54	1,985.51	2,021.87	2,074.56	2,116.33	2,145.27	1.91

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
70. MECHANICS, REPAIRERS&INSTALLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INOUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	2.60
2. OTHER AGRICULTURAL PROOUCTS	0.04	0.03	0.04	0.04	0.04	0.04	2.78
3. FORESTRY & FISHERY PROOUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.83
4. AGR. FORESTRY, & FISHERY SERV.	0.04	0.04	0.04	0.04	0.05	0.05	6.87
5. IRON ORE MINING	0.30	0.35	0.38	0.40	0.42	0.44	7.77
6. NONFERROUS METAL MINING	0.36	0.42	0.47	0.52	0.57	0.60	10.77
7. COAL MINING	0.68	0.77	0.84	0.92	1.00	1.05	9.21
8. CRUDE PETROLEUM & N. GAS	0.75	0.80	0.83	0.87	0.92	0.93	4.26
9. STONE&CLAY MINING & QUARRYING	0.25	0.29	0.31	0.35	0.38	0.41	10.03
10. CHEM&FERTILIZER MIN. MINING	0.05	0.06	0.06	0.07	0.07	0.08	7.90
11. NEW CONSTRUCTION	5.93	6.73	7.25	8.03	8.67	9.12	8.98
13. ORDNANCE & ACCESSORIES	4.08	4.61	5.02	5.42	5.72	5.94	7.80
14. FOOD & KINOREO PRODUCTS	0.65	0.70	0.74	0.79	0.82	0.84	5.26
15. TOBACCO MANUFACTURES	0.01	0.01	0.01	0.01	0.01	0.01	8.04
16. FABRIC, YARN & THREAO MILLS	0.45	0.48	0.51	0.53	0.55	0.57	4.46
17. MISC. TEXTILE GOOOS	0.07	0.08	0.09	0.09	0.10	0.10	7.30
18. APPAREL	0.08	0.09	0.09	0.10	0.11	0.11	6.16
19. MISC. FABRICATEO TEXTILE PROD.	0.08	0.08	0.09	0.09	0.09	0.10	4.68
20. LUMBER & WOOD PRODUCTS	0.38	0.43	0.46	0.50	0.55	0.58	8.61
21. WOOD CONTAINERS	0.05	0.06	0.07	0.07	0.08	0.08	9.82
22. HOUSEHOLD FURNITURE	0.02	0.02	0.02	0.02	0.02	0.02	3.70
23. OTHER FURNITURE & FIXTURES	0.03	0.03	0.03	0.04	0.04	0.04	4.57
24. PAPER & ALLIED PRODUCTS	0.48	0.52	0.57	0.61	0.64	0.67	6.90
25. PAPERBOARD CONTAINERS & BOXES	0.14	0.16	0.18	0.20	0.21	0.23	9.99
26. PRINTING & PUBLISHING	0.13	0.14	0.15	0.17	0.17	0.18	5.87
27. CHEMICALS & PRODUCIS	1.54	1.70	1.82	1.98	2.12	2.22	7.58
28. PLASTICS & SYNTHETIC MATLS.	0.30	0.34	0.38	0.42	0.45	0.47	9.24
29. DRUGS, CLEANING & TOILET PREP.	0.03	0.03	0.04	0.04	0.04	0.04	4.45
30. PAINTS & ALLIED PRODUCTS	0.06	0.07	0.08	0.08	0.09	0.09	8.19
31. PET REFINING & REL. PROO.	0.44	0.47	0.49	0.53	0.55	0.57	5.23
32. RUBBER & MISC. PLASTICS PROO.	0.64	0.72	0.80	0.90	0.99	1.04	10.33
34. FOOTWEAR & OTHER LEATHER PROO.	0.01	0.01	0.01	0.01	0.01	0.01	4.60
35. GLASS & GLASS PRODUCTS	0.15	0.17	0.18	0.20	0.21	0.22	8.70
36. STONE & CLAY PRODUCTS	0.81	0.92	0.99	1.09	1.16	1.22	8.44
37. PRIMARY FERROUS METALS	2.62	2.91	3.15	3.42	3.65	3.80	7.71
38. NONFERROUS METALS	1.72	1.98	2.18	2.40	2.59	2.72	9.52
39. METAL CONTAINERS	0.10	0.11	0.11	0.12	0.13	0.14	6.61

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDOUSTRY MODEL  
ESTIMATES OF INDOUSTRIAL EMPLOYMENT BY OCCUPATION  
70. MECHANICS, REPAIRERS&INSTALLERS  
(THOUSANOS OF PERSONS)

INDOUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
40. FAB. STRUCTURAL METAL PROOUCTS	0.53	0.59	0.63	0.68	0.73	0.77	7.77
41. SCREW MACHINE PROO.&STAMPINGS	0.64	0.71	0.77	0.83	0.89	0.92	7.70
42. OTHER FAB. METAL PROOUCTS	0.36	0.41	0.45	0.50	0.54	0.57	9.66
43. ENGINES & TURBINES	0.27	0.30	0.33	0.35	0.37	0.39	7.71
44. FARM & GAROEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.12
45. CONSTR. & MINING MACHINERY	0.08	0.09	0.10	0.10	0.11	0.11	7.12
46. MATERIALS HANOLING MACH. & EQ.	0.14	0.16	0.17	0.19	0.21	0.21	8.99
47. METALWORKING MACH. & EQ.	0.18	0.21	0.23	0.25	0.27	0.28	9.36
48. SPECIAL INDOUSTRY MACHINERY	0.02	0.02	0.02	0.03	0.03	0.03	12.06
49. GENERAL INDOUSTRY MACHINERY	0.25	0.28	0.30	0.32	0.34	0.35	7.52
50. MISC. NONELECTRICAL MACH.	0.28	0.30	0.33	0.37	0.39	0.40	7.53
51. OFFICE,COMPUTING & ACCT. MACH.	0.68	0.81	0.91	1.01	1.08	1.14	11.04
52. SERVICE INDOUSTRY MACHINES	0.07	0.08	0.09	0.10	0.12	0.13	13.36
53. ELECTRICAL MACHINERY	0.34	0.39	0.43	0.47	0.51	0.53	9.17
54. HOUSEHOLO APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.26	0.29	0.31	0.35	0.37	0.39	8.25
56. RAOIO,TV, & COMMUNICATION EQ.	3.29	3.79	4.16	4.51	4.74	4.85	8.03
57. ELECTRONIC COMPONENTS & ACCESS.	2.10	2.50	2.82	3.15	3.44	3.60	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.14	0.16	0.18	0.20	0.21	0.22	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.57	0.68	0.78	0.92	1.08	1.27	17.14
60. AIRCRAFT & PARTS	13.12	14.94	16.56	18.38	19.78	20.42	9.25
61. OTHER TRANSPORTATION EQ.	1.99	2.10	2.16	2.20	2.27	2.34	3.33
62. INSTRUMENTS & SUPPLIES	0.89	1.00	1.09	1.20	1.28	1.33	8.41
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	0.20	0.22	0.24	0.26	0.28	0.30	8.50
64. MISC. MANUFACTURING	0.06	0.07	0.08	0.08	0.09	0.09	6.22
65. TRANSPORTATION & WAREHOUSING	8.61	9.18	9.66	10.33	10.81	11.09	5.18
66. COMMUNICATION EXC. RAOIO & TV	8.44	8.91	9.42	10.12	10.69	10.83	5.13
67. RAOIO & TV BROAOCASTING	0.01	0.01	0.02	0.02	0.02	0.02	8.20
68. UTILITIES	3.40	3.72	3.99	4.28	4.49	4.57	6.07
69. WHOLESALE & RETAIL TRADE	6.76	7.72	8.59	9.61	10.50	11.15	10.54
70. FINANCE & INSURANCE	0.09	0.10	0.11	0.12	0.13	0.14	9.81
71. REAL ESTATE & RENTAL	1.35	1.49	1.60	1.73	1.83	1.88	6.80
72. PERSONAL SERVICES EXC. AUTO.	3.35	3.83	4.23	4.69	5.08	5.41	10.03
73. BUSINESS SERVICES	1.90	2.18	2.45	2.75	3.00	3.17	10.74
74. EATING & ORINKING-PLACES	0.06	0.06	0.07	0.08	0.08	0.09	9.76
75. AUTOMOBILE REPAIR & SERVICE	2.84	3.14	3.37	3.64	3.87	3.98	6.96
76. AMUSEMENTS	0.30	0.33	0.36	0.40	0.43	0.45	8.68
77. MISC. SERVICES	1.04	1.08	1.13	1.20	1.27	1.30	4.58
81. SELF-EMPLOYEO & UNPAIO FAMILY WORKERS	23.63	24.31	25.38	26.67	27.54	28.00	3.45



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
70. MECHANICS, REPAIRERS&INSTALLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	101.58	99.67	101.66	104.54	108.35	107.15	1.07
TOTAL, ALL INDUSTRIES	213.37	222.22	233.70	247.80	258.47	264.66	4.40
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	3.26	3.29	3.23	3.18	3.16	3.13	-0.80
2. OTHER AGRICULTURAL PRODUCTS	23.59	23.68	23.80	23.72	23.67	23.63	0.04
3. FORESTRY & FISHERY PRODUCTS	0.27	0.29	0.31	0.32	0.32	0.31	2.87
4. AGR. FORESTRY, & FISHERY SERV.	1.93	1.98	2.00	2.05	2.07	2.11	1.77
5. IRON ORE MINING	5.88	6.30	6.74	6.66	6.52	6.37	1.61
6. NONFERROUS METAL MINING	6.22	6.56	6.81	6.97	6.91	6.94	2.21
7. COAL MINING	24.18	25.46	26.45	27.15	28.08	28.73	3.50
8. CRUDE PETROLEUM & N. GAS	10.19	10.19	10.17	9.98	9.85	9.93	-0.52
9. STONE & CLAY MINING & QUARRYING	8.03	8.20	8.49	8.85	9.05	9.14	2.62
10. CHEM & FERTILIZER MIN. MINING	2.61	2.67	2.76	2.83	2.85	2.88	2.00
11. NEW CONSTRUCTION	157.80	161.66	165.47	171.25	175.92	178.88	2.54
13. ORNANCE & ACCESSORIES	6.75	6.89	7.01	7.17	7.26	7.34	1.70
14. FOOD & KINDRED PRODUCTS	96.99	98.48	99.25	99.07	98.27	97.64	0.14
15. TOBACCO MANUFACTURES	5.47	5.51	5.49	5.45	5.43	5.38	-0.34
16. FABRIC, YARN & THREAD MILLS	36.50	37.35	38.10	38.61	38.71	38.52	1.08
17. MISC. TEXTILE GOODS	5.06	5.26	5.49	5.68	5.79	5.84	2.89
18. APPAREL	23.54	23.76	24.32	24.80	24.85	24.88	1.11
19. MISC. FABRICATED TEXTILE PROD.	2.64	2.71	2.78	2.83	2.87	2.90	1.86
20. LUMBER & WOOD PRODUCTS	18.43	19.89	20.58	21.28	21.43	21.17	2.81
21. WOOD CONTAINERS	0.89	0.89	0.91	0.93	0.94	0.94	1.16
22. HOUSEHOLD FURNITURE	3.45	3.64	3.76	3.89	3.97	4.01	3.03
23. OTHER FURNITURE & FIXTURES	2.04	2.05	2.12	2.18	2.22	2.27	2.15
24. PAPER & ALLIED PRODUCTS	25.62	26.44	26.79	26.94	26.98	27.00	1.06
25. PAPERBOARD CONTAINERS & BOXES	6.41	6.66	6.89	7.10	7.26	7.38	2.85
26. PRINTING & PUBLISHING	8.53	8.54	8.58	8.62	8.63	8.64	0.26
27. CHEMICALS & PRODUCTS	32.01	32.60	33.09	33.40	33.58	33.75	1.08
28. PLASTICS & SYNTHETIC MATLS.	12.55	13.07	13.62	14.03	14.29	14.41	2.81
29. DRUGS, CLEANING & TOILET PREP.	9.22	9.31	9.48	9.62	9.65	9.71	1.04
30. PAINTS & ALLIED PRODUCTS	1.19	1.25	1.29	1.34	1.36	1.38	2.97
31. PET REFINING & REL. PROD.	8.19	8.18	8.23	8.31	8.32	8.31	0.29
32. RUBBER & MISC. PLASTICS PROD.	23.41	24.21	25.24	26.07	26.74	27.01	2.80
34. FOOTWEAR & OTHER LEATHER PROD.	2.28	2.27	2.27	2.25	2.21	2.18	-0.86
35. GLASS & GLASS PRODUCTS	6.73	6.80	6.88	6.90	6.84	6.74	0.04
36. STONE & CLAY PRODUCTS	25.17	25.71	26.18	26.85	27.01	26.71	1.19

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
70. MECHANICS, REPAIRERS&INSTALLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
37. PRIMARY FERROUS METALS	36.77	37.85	38.99	39.43	39.54	39.33	1.35
38. NONFERROUS METALS	20.37	21.17	22.08	22.75	23.15	23.52	2.91
39. METAL CONTAINERS	6.83	6.73	6.75	6.87	6.91	6.95	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	11.79	11.84	12.15	12.57	12.85	13.04	2.03
41. SCREW MACHINE PROO.&STAMPINGS	10.38	10.90	11.26	11.45	11.51	11.55	2.17
42. OTHER FAB. METAL PRODUCTS	7.84	8.08	8.43	8.68	8.87	9.07	2.96
43. ENGINES & TURBINES	3.22	3.33	3.45	3.49	3.50	3.52	1.77
44. FARM & GARDEN MACHINERY	2.73	2.80	2.94	2.98	3.02	3.05	2.28
45. CONSTR. & MINING MACHINERY	6.86	7.25	7.62	7.88	8.08	8.16	3.52
46. MATERIALS HANDLING MACH. & EQ.	2.45	2.53	2.68	2.79	2.86	2.91	3.50
47. METALWORKING MACH. & EQ.	3.52	3.66	3.88	4.04	4.15	4.23	3.76
48. SPECIAL INDUSTRY MACHINERY	2.51	2.57	2.69	2.81	2.88	2.94	3.22
49. GENERAL INDUSTRY MACHINERY	5.61	5.75	6.02	6.18	6.28	6.38	2.62
50. MISC. NONELECTRICAL MACH.	2.44	2.50	2.61	2.67	2.69	2.72	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	17.92	19.42	21.00	22.12	23.12	24.31	6.29
52. SERVICE INDUSTRY MACHINES	3.82	3.97	4.18	4.23	4.24	4.24	2.10
53. ELECTRICAL MACHINERY	6.90	7.03	7.35	7.52	7.61	7.67	2.12
54. HOUSEHOLD APPLIANCES	3.66	3.76	3.86	3.99	4.08	4.14	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	5.44	5.48	5.62	5.76	5.85	5.92	1.70
56. RADIO, TV, & COMMUNICATION EQ.	7.80	7.98	8.22	8.36	8.43	8.56	1.88
57. ELECTRONIC COMPONENTS & ACCESS.	9.59	10.00	10.50	10.93	11.24	11.47	3.65
58. MISC. ELECTRICAL MACH. & EQ.	5.24	5.42	5.63	5.70	5.77	5.82	2.12
59. MOTOR VEHICLES & EQUIPMENT	29.66	31.00	32.05	32.57	32.93	33.11	2.23
60. AIRCRAFT & PARTS	26.28	27.51	28.43	29.50	29.75	29.90	2.61
61. OTHER TRANSPORTATION EQ.	6.86	7.06	7.31	7.47	7.48	7.54	1.92
62. INSTRUMENTS & SUPPLIES	7.81	7.75	8.07	8.40	8.63	8.79	2.94
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	4.55	4.81	4.81	5.02	5.18	5.31	3.14
64. MISC. MANUFACTURING	5.86	5.96	6.17	6.36	6.47	6.53	2.17
65. TRANSPORTATION & WAREHOUSING	202.65	208.86	214.77	221.69	224.74	226.40	2.24
66. COMMUNICATION EXC. RADIO & TV	340.05	342.45	350.52	353.96	361.95	365.02	1.43
67. RADIO & TV BROADCASTING	0.63	0.65	0.87	0.68	0.69	0.69	1.77
68. UTILITIES	158.03	158.34	158.53	158.65	158.94	158.97	0.12
69. WHOLESALE & RETAIL TRADE	1,104.60	1,150.64	1,196.94	1,237.92	1,272.32	1,307.74	3.43
70. FINANCE & INSURANCE	10.21	10.43	10.69	11.01	11.35	11.67	2.70
71. REAL ESTATE & RENTAL	49.25	49.49	49.94	50.34	50.51	50.54	0.52
72. PERSONAL SERVICES EXC. AUTO.	182.88	188.87	195.72	202.64	209.59	216.07	3.39
73. BUSINESS SERVICES	39.22	41.36	43.67	46.28	48.59	50.63	5.24
74. EATING & DRINKING PLACES	3.60	3.66	3.72	3.75	3.78	3.79	1.07
75. AUTOMOBILE REPAIR & SERVICE	196.17	199.35	200.55	200.96	201.62	202.83	0.67

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
70. MECHANICS, REPAIRERS&INSTALLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
76. AMUSEMENTS	30.55	31.05	31.99	32.82	33.71	34.53	2.48
77. MISC. SERVICES	161.53	164.56	168.03	172.71	177.99	183.82	2.62
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	371.85	381.25	391.57	400.89	408.87	415.83	2.26
82. GOVERNMENT INDUSTRY	353.27	352.42	355.59	361.34	367.11	372.78	1.08
TOTAL, ALL INDUSTRIES	4,076.97	4,179.97	4,293.14	4,395.30	4,482.79	4,559.08	2.26

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
71. AIRCRAFT MECHANICS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.11	0.13	0.14	0.15	0.16	0.16	7.99
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.02	7.71
56. RADIO, TV, & COMMUNICATION EQ.	0.04	0.04	0.05	0.05	0.05	0.05	7.79
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.01	0.01	0.01	11.50
60. AIRCRAFT & PARTS	7.64	8.73	9.72	10.84	11.71	12.14	9.71
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	3.42
65. TRANSPORTATION & WAREHOUSING	2.29	2.46	2.61	2.81	2.97	3.06	6.00
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.01	0.01	0.02	0.02	8.42
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	12.47
73. BUSINESS SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	6.73
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	1.73
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.47	0.47	0.48	0.50	0.51	0.52	2.10
82. GOVERNMENT INDUSTRY	27.10	26.53	27.01	27.72	28.14	28.30	0.87
TOTAL, ALL INDUSTRIES	37.73	38.46	40.11	42.18	43.66	44.36	3.29
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.18	0.19	0.19	0.20	0.20	0.20	1.88
43. ENGINES & TURBINES	0.13	0.13	0.14	0.14	0.14	0.14	1.77
56. RADIO, TV, & COMMUNICATION EQ.	0.09	0.09	0.09	0.09	0.09	0.09	1.66
57. ELECTRONIC COMPONENTS & ACCESS.	0.03	0.03	0.03	0.03	0.03	0.03	3.77
60. AIRCRAFT & PARTS	15.30	16.08	16.69	17.40	17.62	17.78	3.05
61. OTHER TRANSPORTATION EQ.	0.04	0.04	0.04	0.04	0.04	0.04	2.01
65. TRANSPORTATION & WAREHOUSING	53.86	55.97	58.01	60.35	61.64	62.54	3.03
69. WHOLESALE & RETAIL TRADE	1.81	1.84	1.88	1.91	1.92	1.94	1.46
72. PERSONAL SERVICES EXC. AUTO	0.31	0.33	0.35	0.37	0.39	0.41	5.69
73. BUSINESS SERVICES	0.12	0.12	0.12	0.12	0.12	0.12	1.43
77. MISC. SERVICES	1.31	1.29	1.28	1.28	1.29	1.30	-0.18
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.36	1.39	1.42	1.47	1.50	1.52	2.25
82. GOVERNMENT INDUSTRY	48.61	48.52	49.00	49.91	50.81	51.50	1.16
TOTAL, ALL INDUSTRIES	124.01	126.91	130.18	134.25	136.74	138.58	2.25

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
72. AUTO MECHANICS&REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDOUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.01	0.01	0.01	0.01	0.01	0.01	6.87
5. IRON ORE MINING	0.06	0.07	0.07	0.08	0.08	0.08	7.58
6. NONFERROUS METAL MINING	0.05	0.06	0.07	0.07	0.08	0.09	11.55
7. COAL MINING	0.05	0.05	0.06	0.06	0.07	0.07	9.11
8. CRUDE PETROLEUM & N. GAS	0.12	0.13	0.14	0.14	0.15	0.15	4.19
9. STONE&CLAY MINING & QUARRYING	0.06	0.07	0.07	0.08	0.09	0.09	9.98
11. NEW CONSTRUCTION	0.45	0.51	0.55	0.60	0.65	0.67	8.30
13. ORONANCE & ACCESSORIES	0.47	0.54	0.59	0.64	0.68	0.70	8.31
14. FOOD & KINDRED PRODUCTS	0.09	0.09	0.10	0.10	0.11	0.11	4.30
20. LUMBER & WOOD PRODUCTS	0.08	0.09	0.10	0.11	0.11	0.12	7.45
21. WOOD CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	9.84
24. PAPER & ALLIED PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	6.49
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.80
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.01	0.01	0.01	6.55
27. CHEMICALS & PRODUCTS	0.08	0.09	0.09	0.10	0.11	0.11	7.60
31. PET REFINING & REL. PROO.	0.04	0.04	0.05	0.05	0.05	0.05	5.17
32. RUBBER & MISC. PLASTICS PROO.	0.01	0.01	0.01	0.01	0.01	0.02	10.07
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.38
36. STONE & CLAY PRODUCTS	0.21	0.24	0.28	0.29	0.31	0.33	9.31
37. PRIMARY FERROUS METALS	0.23	0.25	0.27	0.29	0.31	0.32	7.46
38. NONFERROUS METALS	0.19	0.22	0.24	0.26	0.28	0.30	9.81
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	7.47
41. SCREW MACHINE PROO.&STAMPINGS	0.04	0.04	0.05	0.05	0.06	0.06	7.68
42. OTHER FAB. METAL PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	10.04
43. ENGINES & TURBINES	0.02	0.02	0.02	0.03	0.03	0.03	7.74
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.02	0.02	0.02	0.02	0.02	9.12
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.03	0.03	0.03	7.55
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.30
56. RADIO, TV, & COMMUNICATION EQ.	0.05	0.06	0.07	0.07	0.08	0.08	8.26
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.01	0.01	0.01	11.38
59. MOTOR VEHICLES & EQUIPMENT	0.10	0.12	0.13	0.16	0.19	0.22	17.14
60. AIRCRAFT & PARTS	0.26	0.29	0.32	0.36	0.38	0.39	8.58
61. OTHER TRANSPORTATION EQ.	0.21	0.22	0.23	0.24	0.25	0.25	3.53
62. INSTRUMENTS & SUPPLIES	0.02	0.02	0.02	0.02	0.02	0.02	8.09
65. TRANSPORTATION & WAREHOUSING	1.42	1.52	1.61	1.73	1.82	1.88	5.82
66. COMMUNICATION EXC. RADIO & TV	0.09	0.10	0.10	0.11	0.12	0.12	5.37

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
72. AUTO MECHANICS & REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	0.20	0.22	0.24	0.26	0.27	0.28	6.89
69. WHOLESALE & RETAIL TRADE	3.30	3.78	4.21	4.71	5.15	5.47	10.59
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	9.29
72. PERSONAL SERVICES EXC. AUTO.	0.21	0.25	0.28	0.31	0.34	0.38	11.18
73. BUSINESS SERVICES	0.07	0.08	0.09	0.09	0.10	0.10	7.20
75. AUTOMOBILE REPAIR & SERVICE	2.45	2.71	2.91	3.15	3.34	3.44	6.99
77. MISC. SERVICES	0.09	0.09	0.10	0.10	0.10	0.10	2.21
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	5.61	5.94	6.31	6.74	7.05	7.26	5.31
82. GOVERNMENT INDUSTRY	5.00	4.93	5.05	5.21	5.32	5.38	1.48
TOTAL, ALL INDUSTRIES	21.57	23.11	24.67	26.53	28.03	29.02	6.11
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.42	0.44	0.44	0.45	0.46	0.46	1.77
5. IRON ORE MINING	1.12	1.20	1.28	1.26	1.24	1.21	1.43
6. NONFERROUS METAL MINING	0.85	0.90	0.94	0.97	0.97	0.98	2.93
7. COAL MINING	1.64	1.72	1.78	1.83	1.89	1.93	3.41
8. CRUDE PETROLEUM & N. GAS	1.69	1.69	1.69	1.65	1.63	1.64	-0.60
9. STONE & CLAY MINING & QUARRYING	1.86	1.90	1.96	2.04	2.09	2.11	2.57
11. NEW CONSTRUCTION	12.05	12.26	12.47	12.83	13.10	13.24	1.90
13. ORDNANCE & ACCESSORIES	0.78	0.80	0.82	0.84	0.86	0.87	2.18
14. FOOD & KINDRED PRODUCTS	13.06	13.14	13.13	12.98	12.76	12.56	-0.78
20. LUMBER & WOOD PRODUCTS	4.04	4.31	4.41	4.51	4.50	4.39	1.72
21. WOOD CONTAINERS	0.13	0.13	0.13	0.14	0.14	0.14	1.18
24. PAPER & ALLIED PRODUCTS	1.28	1.32	1.33	1.33	1.33	1.33	0.67
25. PAPERBOARD CONTAINERS & BOXES	0.25	0.25	0.26	0.27	0.27	0.27	1.74
26. PRINTING & PUBLISHING	0.45	0.45	0.46	0.46	0.47	0.47	0.91
27. CHEMICALS & PRODUCTS	1.63	1.66	1.68	1.70	1.71	1.72	1.08
31. PET REFINING & REL. PROD.	0.75	0.75	0.78	0.76	0.76	0.76	0.23
32. RUBBER & MISC. PLASTICS PROD.	0.36	0.37	0.38	0.40	0.41	0.41	2.65
35. GLASS & GLASS PRODUCTS	0.35	0.35	0.35	0.35	0.35	0.34	-0.25
36. STONE & CLAY PRODUCTS	6.55	6.75	6.93	7.16	7.26	7.24	2.01
37. PRIMARY FERROUS METALS	3.17	3.25	3.34	3.37	3.37	3.35	1.11
38. NONFERROUS METALS	2.21	2.31	2.41	2.49	2.54	2.59	3.19
40. FAB. STRUCTURAL METAL PRODUCTS	0.69	0.70	0.71	0.73	0.75	0.76	1.75
41. SCREW MACHINE PROD. & STAMPINGS	0.65	0.68	0.70	0.71	0.72	0.72	2.15
42. OTHER FAB. METAL PRODUCTS	0.32	0.33	0.35	0.36	0.37	0.38	3.32
43. ENGINES & TURBINES	0.23	0.24	0.25	0.25	0.25	0.26	1.80
45. CONSTR. & MINING MACHINERY	0.66	0.69	0.73	0.76	0.78	0.79	3.65

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
72. AUTO MECHANICS&REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
46. MATERIALS HANDLING MACH. & EQ.	0.23	0.24	0.26	0.27	0.27	0.28	3.63
50. MISC. NONELECTRICAL MACH.	0.17	0.18	0.18	0.19	0.19	0.19	2.24
53. ELECTRICAL MACHINERY	0.18	0.18	0.19	0.20	0.20	0.20	2.23
56. RADIO, TV, & COMMUNICATION EQ.	0.12	0.13	0.13	0.13	0.14	0.14	2.10
57. ELECTRONIC COMPONENTS & ACCESS.	0.03	0.03	0.04	0.04	0.04	0.04	3.66
59. MOTOR VEHICLES & EQUIPMENT	5.08	5.31	5.49	5.58	5.64	5.67	2.23
60. AIRCRAFT & PARTS	0.52	0.54	0.55	0.57	0.57	0.57	1.99
61. OTHER TRANSPORTATION EQ.	0.73	0.76	0.79	0.80	0.81	0.82	2.11
62. INSTRUMENTS & SUPPLIES	0.14	0.15	0.15	0.16	0.16	0.16	2.64
65. TRANSPORTATION & WAREHOUSING	33.32	34.56	35.76	37.14	37.87	38.36	2.86
66. COMMUNICATION EXC. RADIO & TV	3.64	3.68	3.77	3.82	3.91	3.95	1.66
68. UTILITIES	9.33	9.43	9.51	9.59	9.68	9.76	0.90
69. WHOLESALE & RETAIL TRADE	540.08	562.91	585.88	606.25	623.39	641.04	3.49
71. REAL ESTATE & RENTAL	0.25	0.26	0.27	0.27	0.28	0.29	2.86
72. PERSONAL SERVICES EXC. AUTO.	11.71	12.24	12.82	13.41	14.01	14.57	4.47
73. BUSINESS SERVICES	1.49	1.52	1.55	1.59	1.62	1.64	1.88
75. AUTOMOBILE REPAIR & SERVICE	169.28	172.07	173.14	173.54	174.15	175.22	0.69
77. MISC. SERVICES	14.37	14.29	14.25	14.31	14.43	14.58	0.29
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	219.48	226.60	233.39	239.42	244.40	249.48	2.60
82. GOVERNMENT INDUSTRY	42.37	42.17	42.44	42.96	43.50	44.15	0.83
TOTAL, ALL INDUSTRIES	1,117.03	1,153.22	1,187.79	1,218.47	1,243.86	1,269.70	2.60

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
73. DATA PROCESSING MACHINE MECHANICS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.09	0.11	0.12	0.12	0.13	0.14	8.22
51. OFFICE, COMPUTING & ACCT. MACH.	0.55	0.67	0.76	0.84	0.91	0.97	11.80
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.30
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.22
56. RADIO, TV, & COMMUNICATION EQ.	0.28	0.33	0.36	0.39	0.41	0.42	8.11
57. ELECTRONIC COMPONENTS & ACCESS.	0.05	0.07	0.07	0.08	0.09	0.09	11.37
60. AIRCRAFT & PARTS	0.16	0.18	0.19	0.21	0.23	0.23	8.59
62. INSTRUMENTS & SUPPLIES	0.03	0.03	0.04	0.04	0.04	0.05	8.19
66. COMMUNICATION EXC. RADIO & TV	0.02	0.02	0.02	0.02	0.02	0.02	6.02
69. WHOLESALE & RETAIL TRADE	0.34	0.41	0.46	0.56	0.64	0.70	15.84
72. PERSONAL SERVICES EXC. AUTO.	0.10	0.12	0.14	0.16	0.17	0.18	11.90
73. BUSINESS SERVICES	0.69	0.82	0.96	1.12	1.26	1.37	14.84
77. MISC. SERVICES	0.02	0.02	0.02	0.02	0.02	0.02	5.21
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.02	0.02	0.02	0.02	10.81
82. GOVERNMENT INDUSTRY	0.13	0.13	0.13	0.13	0.14	0.14	0.88
TOTAL, ALL INDUSTRIES	2.55	2.99	3.36	3.82	4.19	4.47	11.85
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.15	0.16	0.16	0.17	0.17	0.17	2.09
51. OFFICE, COMPUTING & ACCT. MACH.	14.69	16.06	17.50	18.55	19.51	20.62	7.01
53. ELECTRICAL MACHINERY	0.18	0.19	0.20	0.20	0.20	0.21	2.24
55. ELECTRIC LIGHTING & WIRING EQ.	0.19	0.19	0.20	0.20	0.20	0.21	1.67
56. RADIO, TV, & COMMUNICATION EQ.	0.67	0.69	0.71	0.72	0.73	0.74	1.96
57. ELECTRONIC COMPONENTS & ACCESS.	0.25	0.26	0.27	0.28	0.29	0.30	3.65
60. AIRCRAFT & PARTS	0.31	0.32	0.33	0.34	0.34	0.34	1.99
62. INSTRUMENTS & SUPPLIES	0.26	0.27	0.28	0.29	0.29	0.30	2.73
66. COMMUNICATION EXC. RADIO & TV	0.67	0.68	0.70	0.72	0.74	0.75	2.29
69. WHOLESALE & RETAIL TRADE	54.95	60.62	66.36	71.87	77.02	82.22	8.39
72. PERSONAL SERVICES EXC. AUTO.	5.72	6.03	6.36	6.70	7.03	7.35	5.15
73. BUSINESS SERVICES	14.14	15.62	17.18	18.65	20.43	21.89	9.14
77. MISC. SERVICES	2.72	2.79	2.87	2.96	3.07	3.19	3.23
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.32	0.35	0.38	0.41	0.43	0.46	7.81
82. GOVERNMENT INDUSTRY	1.30	1.29	1.28	1.29	1.29	1.30	0.01
TOTAL, ALL INDUSTRIES	98.64	107.68	116.99	125.80	134.05	142.37	7.61

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE



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BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
74. DIESEL MECHANICS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.03	0.03	0.03	0.03	0.04	0.04	7.54
6. NONFERROUS METAL MINING	0.03	0.03	0.03	0.04	0.04	0.04	9.73
7. COAL MINING	0.03	0.04	0.04	0.05	0.05	0.05	9.10
8. CRUDE PETROLEUM & N. GAS	0.08	0.08	0.09	0.09	0.09	0.10	4.15
9. STONE&CLAY MINING & QUARRYING	0.02	0.02	0.02	0.02	0.03	0.03	10.31
11. NEW CONSTRUCTION	0.30	0.34	0.37	0.40	0.43	0.45	8.25
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.66
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.11
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.02	0.02	0.03	7.56
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.31
56. RADIO, TV, & COMMUNICATION EQ.	0.03	0.03	0.04	0.04	0.04	0.04	8.08
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.02	0.02	0.02	0.03	0.03	17.14
60. AIRCRAFT & PARTS	0.08	0.10	0.10	0.12	0.12	0.13	8.59
65. TRANSPORTATION & WAREHOUSING	2.26	2.44	2.59	2.80	2.96	3.06	6.22
69. WHOLESALE & RETAIL TRADE	0.47	0.53	0.58	0.65	0.70	0.74	9.70
73. BUSINESS SERVICES	0.12	0.13	0.14	0.15	0.16	0.16	6.67
75. AUTOMOBILE REPAIR & SERVICE	0.28	0.31	0.33	0.36	0.38	0.39	6.69
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.10	0.11	0.11	0.12	0.13	0.13	5.92
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	1.67
TOTAL, ALL INDUSTRIES	3.94	4.31	4.62	5.02	5.33	5.53	7.05
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.51	0.54	0.58	0.57	0.56	0.54	1.40
6. NONFERROUS METAL MINING	0.45	0.47	0.48	0.49	0.48	0.48	1.25
7. COAL MINING	1.20	1.26	1.31	1.34	1.38	1.41	3.40
8. CRUDE PETROLEUM & N. GAS	1.05	1.05	1.05	1.03	1.01	1.02	0.63
9. STONE&CLAY MINING & QUARRYING	0.56	0.58	0.60	0.63	0.64	0.65	2.88
11. NEW CONSTRUCTION	8.08	8.21	8.35	8.58	8.76	8.85	1.85
43. ENGINES & TURBINES	0.10	0.11	0.11	0.11	0.11	0.11	1.72
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.12	0.13	0.14	0.14	0.14	3.61
50. MISC. NONELECTRICAL MACH.	0.15	0.16	0.16	0.17	0.17	0.17	2.25
53. ELECTRICAL MACHINERY	0.13	0.13	0.14	0.14	0.15	0.15	2.24
56. RADIO, TV, & COMMUNICATION EQ.	0.07	0.07	0.07	0.07	0.08	0.08	1.94
59. MOTOR VEHICLES & EQUIPMENT	0.77	0.81	0.83	0.85	0.86	0.86	2.23
60. AIRCRAFT & PARTS	0.17	0.18	0.18	0.19	0.19	0.19	2.00
65. TRANSPORTATION & WAREHOUSING	53.28	55.49	57.64	60.08	61.49	62.51	3.25

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
74. DIESEL MECHANICS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	76.28	78.80	81.33	83.48	85.18	86.96	2.65
73. BUSINESS SERVICES	2.45	2.48	2.52	2.57	2.61	2.63	1.37
75. AUTOMOBILE REPAIR & SERVICE	19.40	19.66	19.72	19.71	19.73	19.80	0.41
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.45	3.55	3.66	3.76	3.82	3.89	2.42
82. GOVERNMENT INDUSTRY	7.70	7.64	7.56	7.71	7.77	7.88	0.46
TOTAL, ALL INDUSTRIES	177.62	183.05	188.33	193.46	197.00	200.21	2.42

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
75. ELEC. INSTRUMENT&TOOL REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.99
56. RADIO, TV, & COMMUNICATION EQ.	0.44	0.51	0.56	0.61	0.64	0.66	8.19
57. ELECTRONIC COMPONENTS & ACCESS.	0.23	0.28	0.31	0.35	0.38	0.40	11.37
72. PERSONAL SERVICES EXC. AUTO.	0.03	0.03	0.04	0.04	0.05	0.05	9.77
73. BUSINESS SERVICES	0.07	0.07	0.08	0.09	0.09	0.10	7.45
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.00	2.95	3.02	3.10	3.16	3.18	1.15
82. GOVERNMENT INDUSTRY	21.94	21.47	21.85	22.42	22.76	22.88	0.84
TOTAL, ALL INDUSTRIES	25.74	25.35	25.89	26.64	27.11	27.29	1.18
TOTAL EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.19	0.20	0.21	0.21	0.21	0.21	1.95
56. RADIO, TV, & COMMUNICATION EQ.	1.05	1.08	1.11	1.13	1.14	1.16	2.04
57. ELECTRONIC COMPONENTS & ACCESS.	1.06	1.11	1.16	1.21	1.24	1.27	3.65
72. PERSONAL SERVICES EXC. AUTO.	1.65	1.70	1.76	1.82	1.87	1.93	3.15
73. BUSINESS SERVICES	1.37	1.40	1.43	1.47	1.50	1.52	2.11
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.67	3.72	3.80	3.91	4.02	4.09	2.17
82. GOVERNMENT INDUSTRY	24.60	24.76	25.24	26.00	26.74	27.20	2.03
TOTAL, ALL INDUSTRIES	34.68	35.07	35.85	36.92	37.93	38.61	2.17
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
76. ELECTRIC MOTOR REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.05	0.06	0.06	0.07	0.07	0.08	9.32
56. RADIO, TV, & COMMUNICATION EQ.	0.02	0.02	0.03	0.03	0.03	0.03	8.40
57. ELECTRONIC COMPONENTS & ACCESS.	0.03	0.03	0.04	0.04	0.04	0.05	11.37
72. PERSONAL SERVICES EXC. AUTO.	0.48	0.53	0.60	0.68	0.75	0.81	12.07
73. BUSINESS SERVICES	0.04	0.04	0.05	0.05	0.06	0.06	7.18
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.09	0.10	0.11	0.12	0.13	0.13	8.70
82. GOVERNMENT INDUSTRY	0.16	0.16	0.16	0.16	0.17	0.17	1.62
TOTAL, ALL INDUSTRIES	0.84	0.95	1.04	1.15	1.25	1.33	9.52
TOTAL EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.97	0.99	1.04	1.06	1.07	1.08	2.25
56. RADIO, TV, & COMMUNICATION EQ.	0.05	0.05	0.05	0.05	0.05	0.05	2.23
57. ELECTRONIC COMPONENTS & ACCESS.	0.12	0.13	0.13	0.14	0.14	0.14	3.65
72. PERSONAL SERVICES EXC. AUTO.	24.92	26.30	27.80	29.32	30.84	32.29	5.32
73. BUSINESS SERVICES	0.83	0.84	0.86	0.88	0.90	0.91	1.86
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.62	2.76	2.91	3.06	3.21	3.35	5.06
82. GOVERNMENT INDUSTRY	0.19	0.19	0.20	0.21	0.21	0.22	2.83
TOTAL, ALL INDUSTRIES	29.91	31.47	33.21	34.94	36.65	38.28	5.06
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
77. ENGINEERING EQUIPMENT REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	2.61
2. OTHER AGRICULTURAL PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	2.77
4. AGR. FORESTRY & FISHERY SERV.	0.02	0.02	0.02	0.02	0.02	0.03	6.86
5. IRON ORE MINING	0.03	0.03	0.04	0.04	0.04	0.04	7.92
6. NONFERROUS METAL MINING	0.02	0.02	0.03	0.03	0.03	0.03	9.75
7. COAL MINING	0.04	0.05	0.05	0.06	0.07	0.07	9.15
8. CRUDE PETROLEUM & N. GAS	0.01	0.01	0.01	0.01	0.01	0.01	4.64
9. STONE & CLAY MINING & QUARRYING	0.02	0.02	0.02	0.02	0.02	0.03	10.24
11. NEW CONSTRUCTION	0.33	0.37	0.40	0.44	0.47	0.49	8.28
13. ORNANCE & ACCESSORIES	0.15	0.16	0.18	0.19	0.20	0.21	7.28
20. LUMBER & WOOD PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	6.92
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.72
27. CHEMICALS & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.29
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.70
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.03	0.04	0.04	0.04	0.05	10.28
36. STONE & CLAY PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	8.15
37. PRIMARY FERROUS METALS	0.02	0.02	0.02	0.02	0.02	0.03	7.37
38. NONFERROUS METALS	0.02	0.02	0.03	0.03	0.03	0.03	10.04
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.01	7.71
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	9.59
56. RADIO, TV, & COMMUNICATION EQ.	0.06	0.06	0.07	0.08	0.08	0.08	7.75
57. ELECTRONIC COMPONENTS & ACCESS.	0.02	0.02	0.02	0.02	0.03	0.03	11.40
60. AIRCRAFT & PARTS	0.13	0.14	0.16	0.17	0.19	0.19	8.59
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.03	3.32
62. INSTRUMENTS & SUPPLIES	0.01	0.02	0.02	0.02	0.02	0.02	8.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.02	0.02	8.49
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.04	0.04	0.04	3.50
68. UTILITIES	0.04	0.04	0.05	0.05	0.05	0.06	6.16
69. WHOLESALE & RETAIL TRADE	0.26	0.29	0.32	0.36	0.39	0.41	9.18
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	10.92
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.09	0.10	0.10	0.11	0.11	0.11	3.96
TOTAL, ALL INDUSTRIES	1.56	1.74	1.89	2.06	2.19	2.28	7.82
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	2.18	2.20	2.17	2.13	2.11	2.09	-0.80
2. OTHER AGRICULTURAL PRODUCTS	15.80	15.86	15.94	15.88	15.85	15.83	0.03

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
77. ENGINEERING EQUIPMENT REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
4. AGR., FORESTRY, & FISHERY SERV.	0.98	1.01	1.02	1.04	1.05	1.07	1.77
5. IRON ORE MINING	0.58	0.62	0.67	0.66	0.65	0.63	1.76
6. NONFERROUS METAL MINING	0.35	0.36	0.37	0.38	0.37	0.37	1.26
7. COAL MINING	1.58	1.66	1.72	1.77	1.83	1.87	3.45
8. CRUDE PETROLEUM & N. GAS	0.12	0.12	0.12	0.12	0.11	0.12	-0.16
9. STONE & CLAY MINING & QUARRYING	0.51	0.52	0.54	0.56	0.58	0.58	2.82
11. NEW CONSTRUCTION	8.77	8.92	9.07	9.32	9.52	9.62	1.88
13. ORNANCE & ACCESSORIES	0.24	0.24	0.25	0.25	0.25	0.26	1.21
20. LUMBER & WOOD PRODUCTS	1.02	1.08	1.10	1.12	1.11	1.08	1.21
24. PAPER & ALLIED PRODUCTS	0.48	0.49	0.50	0.50	0.50	0.50	0.89
27. CHEMICALS & PRODUCTS	0.12	0.12	0.13	0.13	0.13	0.13	0.79
31. PET REFINING & REL. PROD.	0.19	0.19	0.19	0.19	0.19	0.19	-0.22
32. RUBBER & MISC. PLASTICS PROD.	1.06	1.10	1.14	1.18	1.21	1.22	2.85
36. STONE & CLAY PRODUCTS	0.69	0.70	0.71	0.73	0.73	0.72	0.92
37. PRIMARY FERROUS METALS	0.25	0.25	0.26	0.26	0.26	0.26	1.03
38. NONFERROUS METALS	0.25	0.26	0.27	0.28	0.28	0.29	3.40
41. SCREW MACHINE PROD. & STAMPINGS	0.12	0.13	0.13	0.14	0.14	0.14	2.18
42. OTHER FAB. METAL PRODUCTS	0.18	0.19	0.19	0.20	0.20	0.21	2.90
56. RADIO, TV, & COMMUNICATION EQ.	0.13	0.14	0.14	0.14	0.14	0.15	1.62
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.08	0.08	0.09	0.09	0.09	3.68
60. AIRCRAFT & PARTS	0.25	0.26	0.27	0.28	0.28	0.28	2.00
61. OTHER TRANSPORTATION EQ.	0.10	0.10	0.11	0.11	0.11	0.11	1.91
62. INSTRUMENTS & SUPPLIES	0.12	0.12	0.12	0.13	0.13	0.13	2.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.24	0.25	0.26	0.27	0.28	0.28	3.13
65. TRANSPORTATION & WAREHOUSING	0.73	0.74	0.75	0.76	0.76	0.76	0.60
68. UTILITIES	1.90	1.90	1.91	1.91	1.92	1.92	0.20
69. WHOLESALE & RETAIL TRADE	42.67	43.85	45.04	46.01	46.73	47.49	2.16
72. PERSONAL SERVICES EXC. AUTO.	0.32	0.33	0.34	0.36	0.37	0.39	4.23
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.24	3.30	3.36	3.41	3.45	3.48	1.42
TOTAL, ALL INDUSTRIES	100.88	102.71	104.56	106.12	107.23	108.26	1.42

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
78. INSTRUMENT REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.05	0.05	0.08	0.06	0.06	0.06	4.66
13. ORDNANCE & ACCESSORIES	0.13	0.14	0.16	0.17	0.18	0.19	8.42
24. PAPER & ALLIED PRODUCTS	0.04	0.05	0.05	0.05	0.06	0.06	6.46
27. CHEMICALS & PRODUCTS	0.18	0.20	0.21	0.23	0.25	0.26	7.83
28. PLASTICS & SYNTHETIC MATLS.	0.04	0.04	0.04	0.05	0.05	0.05	8.71
31. PET REFINING & REL. PROD.	0.08	0.09	0.09	0.10	0.11	0.11	5.25
32. RUBBER & MISC. PLASTICS PROD.	0.02	0.03	0.03	0.03	0.04	0.04	9.87
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.99
36. STONE & CLAY PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	5.08
37. PRIMARY FERROUS METALS	0.10	0.11	0.12	0.13	0.14	0.14	6.95
38. NONFERROUS METALS	0.05	0.05	0.06	0.06	0.07	0.07	10.00
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.76
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.02	7.51
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.22
56. RADIO, TV, & COMMUNICATION EQ.	0.21	0.24	0.26	0.29	0.30	0.31	8.25
57. ELECTRONIC COMPONENTS & ACCESS.	0.05	0.06	0.07	0.07	0.08	0.09	11.35
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.01	0.02	17.13
60. AIRCRAFT & PARTS	0.87	0.99	1.09	1.20	1.29	1.32	8.59
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.03	2.88
62. INSTRUMENTS & SUPPLIES	0.16	0.18	0.19	0.21	0.22	0.23	8.05
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.04	0.04	0.04	0.05	0.05	8.51
68. UTILITIES	0.18	0.20	0.21	0.23	0.24	0.24	5.94
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.01	0.01	0.01	0.01	8.33
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	12.52
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.06	0.06	0.06	0.07	0.07	0.07	2.74
82. GOVERNMENT INDUSTRY	5.00	4.93	5.05	5.22	5.33	5.39	1.51
TOTAL, ALL INDUSTRIES	7.37	7.58	7.94	8.37	8.66	8.85	3.73
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.69	0.69	0.70	0.69	0.68	0.69	-0.15
13. ORDNANCE & ACCESSORIES	0.21	0.21	0.22	0.23	0.23	0.23	2.28
24. PAPER & ALLIED PRODUCTS	2.26	2.33	2.35	2.35	2.34	2.34	0.64
27. CHEMICALS & PRODUCTS	3.69	3.77	3.83	3.88	3.91	3.93	1.30
28. PLASTICS & SYNTHETIC MATLS.	1.48	1.54	1.59	1.63	1.65	1.66	2.31
31. PET REFINING & REL. PROD.	1.55	1.55	1.56	1.58	1.58	1.58	0.31
32. RUBBER & MISC. PLASTICS PROD.	0.88	0.91	0.94	0.97	0.99	1.00	2.47



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
78. INSTRUMENT REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
35. GLASS & GLASS PRODUCTS	0.36	0.37	0.37	0.37	0.36	0.35	-0.61
36. STONE & CLAY PRODUCTS	0.41	0.40	0.40	0.39	0.38	0.37	-1.94
37. PRIMARY FERROUS METALS	1.42	1.45	1.48	1.49	1.48	1.46	0.63
38. NONFERROUS METALS	0.54	0.56	0.59	0.61	0.62	0.63	3.36
43. ENGINES & TURBINES	0.09	0.10	0.10	0.10	0.10	0.10	1.82
49. GENERAL INDUSTRY MACHINERY	0.25	0.25	0.26	0.27	0.28	0.28	2.62
53. ELECTRICAL MACHINERY	0.17	0.17	0.18	0.18	0.18	0.19	2.16
56. RADIO, TV, & COMMUNICATION EQ.	0.49	0.50	0.52	0.53	0.54	0.55	2.10
57. ELECTRONIC COMPONENTS & ACCESS.	0.23	0.24	0.25	0.26	0.27	0.27	3.63
59. MOTOR VEHICLES & EQUIPMENT	0.35	0.37	0.38	0.39	0.39	0.40	2.22
60. AIRCRAFT & PARTS	1.75	1.82	1.87	1.93	1.93	1.93	2.00
61. OTHER TRANSPORTATION EQ.	0.09	0.10	0.10	0.10	0.10	0.10	1.48
62. INSTRUMENTS & SUPPLIES	1.34	1.38	1.41	1.46	1.50	1.52	2.59
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.78	0.79	0.83	0.86	0.89	0.91	3.14
68. UTILITIES	8.44	8.45	8.45	8.44	8.45	8.44	0.00
69. WHOLESALE & RETAIL TRADE	0.95	0.97	0.98	1.00	1.01	1.01	1.37
72. PERSONAL SERVICES EXC. AUTO.	0.42	0.45	0.48	0.51	0.53	0.56	5.73
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.27	0.28	0.28	0.29	0.29	0.29	1.35
82. GOVERNMENT INDUSTRY	8.45	8.51	8.68	8.93	9.18	9.38	2.10
TOTAL, ALL INDUSTRIES	39.07	39.65	40.35	41.01	41.46	41.78	1.35

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
79. MAINT. MECH&REPAIRERS GEN UTIL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.08	0.09	0.10	0.11	0.11	0.12	7.80
6. NONFERROUS METAL MINING	0.13	0.16	0.18	0.20	0.21	0.23	10.91
7. COAL MINING	0.17	0.19	0.21	0.23	0.25	0.28	9.19
8. CRUDE PETROLEUM & N. GAS	0.45	0.48	0.50	0.52	0.55	0.56	4.22
9. STONE&CLAY MINING & QUARRYING	0.13	0.14	0.15	0.17	0.19	0.20	9.92
10. CHEM&FERTILIZER MIN. MINING	0.03	0.03	0.03	0.03	0.04	0.04	7.90
11. NEW CONSTRUCTION	0.82	0.94	1.01	1.12	1.21	1.28	9.18
13. ORONANCE & ACCESSORIES	1.63	1.84	2.00	2.16	2.27	2.36	7.70
14. FOOD & KINDRED PRODUCTS	0.51	0.56	0.59	0.63	0.65	0.67	5.48
16. FABRIC, YARN & THREAD MILLS	0.10	0.11	0.11	0.12	0.13	0.13	5.56
17. MISC. TEXTILE GOODS	0.04	0.04	0.05	0.05	0.06	0.06	7.59
18. APPAREL	0.01	0.01	0.01	0.02	0.02	0.02	5.83
19. MISC. FABRICATED TEXTILE PROD.	0.03	0.03	0.03	0.03	0.03	0.04	4.69
20. LUMBER & WOOD PRODUCTS	0.20	0.23	0.25	0.27	0.29	0.31	9.23
21. WOOD CONTAINERS	0.04	0.05	0.05	0.06	0.06	0.07	9.80
22. HOUSEHOLD FURNITURE	0.01	0.02	0.02	0.02	0.02	0.02	3.70
23. OTHER FURNITURE & FIXTURES	0.03	0.03	0.03	0.03	0.03	0.03	4.58
24. PAPER & ALLIED PRODUCTS	0.24	0.26	0.28	0.30	0.32	0.33	7.06
25. PAPER&DARD CONTAINERS & BOXES	0.12	0.14	0.15	0.17	0.18	0.20	10.19
26. PRINTING & PUBLISHING	0.11	0.12	0.13	0.14	0.14	0.15	5.82
27. CHEMICALS & PRODUCTS	1.07	1.18	1.27	1.37	1.47	1.54	7.47
28. PLASTICS & SYNTHETIC MATLS.	0.21	0.24	0.26	0.29	0.31	0.33	9.48
29. DRUGS, CLEANING & TOILET PREP.	0.02	0.02	0.02	0.02	0.02	0.02	4.45
30. PAINTS & ALLIED PRODUCTS	0.05	0.06	0.07	0.07	0.08	0.08	8.20
31. PET REFINING & REL. PROD.	0.28	0.30	0.31	0.33	0.35	0.36	5.25
32. RUBBER & MISC. PLASTICS PROD.	0.53	0.59	0.66	0.74	0.81	0.86	10.35
35. GLASS & GLASS PRODUCTS	0.10	0.11	0.12	0.14	0.15	0.16	8.96
36. STONE & CLAY PRODUCTS	0.49	0.56	0.60	0.66	0.71	0.74	8.33
37. PRIMARY FERROUS METALS	1.38	1.54	1.67	1.83	1.95	2.04	8.19
38. NONFERROUS METALS	1.15	1.32	1.45	1.60	1.72	1.80	9.33
39. METAL CONTAINERS	0.07	0.08	0.08	0.09	0.10	0.10	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.37	0.42	0.45	0.48	0.51	0.54	7.81
41. SCREW MACHINE PROD.&STAMPINGS	0.41	0.46	0.49	0.54	0.57	0.60	7.70
42. OTHER FAB. METAL PRODUCTS	0.27	0.31	0.34	0.37	0.40	0.43	9.64
43. ENGINES & TURBINES	0.11	0.13	0.14	0.15	0.15	0.16	7.71
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.11
45. CDNSTR. & MINING MACHINERY	0.04	0.05	0.05	0.05	0.06	0.06	7.25

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
79. MAINT. MECH&REPAIRERS GEN UTIL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
46. MATERIALS HANDLING MACH. & EQ.	0.07	0.08	0.09	0.10	0.11	0.11	9.12
47. METALWORKING MACH. & EQ.	0.13	0.15	0.17	0.19	0.20	0.21	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.02	0.02	0.02	12.05
49. GENERAL INDUSTRY MACHINERY	0.16	0.17	0.18	0.20	0.21	0.22	7.51
50. MISC. NONELECTRICAL MACH.	0.19	0.20	0.22	0.25	0.26	0.27	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.07	0.08	0.09	0.10	0.10	0.10	7.32
52. SERVICE INDUSTRY MACHINES	0.04	0.04	0.05	0.05	0.06	0.07	13.37
53. ELECTRICAL MACHINERY	0.19	0.22	0.24	0.26	0.28	0.29	9.09
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.18	0.20	0.22	0.24	0.26	0.27	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.58	1.81	1.99	2.15	2.27	2.32	8.00
57. ELECTRONIC COMPONENTS & ACCESS.	1.52	1.81	2.04	2.28	2.49	2.61	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.10	0.11	0.12	0.14	0.15	0.16	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.26	0.31	0.36	0.42	0.50	0.58	17.14
60. AIRCRAFT & PARTS	2.30	2.60	2.86	3.16	3.38	3.47	8.59
61. OTHER TRANSPORTATION EQ.	0.88	0.93	0.96	0.98	1.01	1.04	3.35
62. INSTRUMENTS & SUPPLIES	0.57	0.64	0.70	0.77	0.82	0.85	8.53
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.10	0.11	0.11	0.13	0.14	0.14	8.53
64. MISC. MANUFACTURING	0.05	0.05	0.05	0.06	0.06	0.06	5.84
65. TRANSPORTATION & WAREHOUSING	0.70	0.74	0.78	0.82	0.86	0.87	4.33
66. COMMUNICATION EXC. RADIO & TV	0.05	0.06	0.06	0.07	0.07	0.07	5.51
68. UTILITIES	0.47	0.52	0.56	0.60	0.63	0.64	6.13
69. WHOLESALE & RETAIL TRADE	0.69	0.78	0.86	0.96	1.03	1.09	9.61
70. FINANCE & INSURANCE	0.07	0.08	0.09	0.10	0.11	0.12	9.85
71. REAL ESTATE & RENTAL	1.33	1.46	1.58	1.71	1.80	1.85	6.78
72. PERSONAL SERVICES EXC. AUTO.	1.06	1.21	1.33	1.47	1.59	1.69	9.67
73. BUSINESS SERVICES	0.49	0.55	0.61	0.66	0.73	0.77	9.39
74. EATING & DRINKING PLACES	0.04	0.04	0.05	0.05	0.06	0.06	9.74
75. AUTOMOBILE REPAIR & SERVICE	0.08	0.09	0.10	0.11	0.11	0.12	7.23
76. AMUSEMENTS	0.18	0.20	0.22	0.24	0.26	0.28	8.95
77. MISC. SERVICES	0.76	0.79	0.83	0.89	0.94	0.97	5.16
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.52	0.55	0.58	0.61	0.64	0.65	4.65
82. GOVERNMENT INDUSTRY	4.62	4.55	4.66	4.81	4.91	4.97	1.46
TOTAL, ALL INDUSTRIES	30.94	34.02	36.67	39.75	42.24	43.83	7.22
TOTAL EMPLOYMENT							
5. IRON ORE MINING	1.57	1.68	1.80	1.78	1.74	1.70	1.64
6. NONFERROUS METAL MINING	2.32	2.44	2.54	2.60	2.58	2.60	2.34

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
79. MAINT. MECH&REPAIRERS GEN UTIL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
7. COAL MINING	6.07	6.39	6.64	6.81	7.05	7.21	3.49
8. CRUDE PETROLEUM & N. GAS	6.12	6.12	6.10	5.99	5.90	5.95	-0.56
9. STONE&CLAY MINING & QUARRYING	4.00	4.08	4.22	4.40	4.49	4.53	2.52
10. CHEM&FERTILIZER MIN. MINING	1.1	1.35	1.39	1.42	1.44	1.45	2.00
11. NEW CONSTRUCTION	21.1	22.53	23.11	23.96	24.65	25.11	2.72
13. ORDNANCE & ACCESSORIES	2.69	2.75	2.79	2.85	2.89	2.91	1.61
14. FOOD & KINDRED PRODUCTS	76.81	78.16	78.93	78.95	78.48	78.14	0.35
16. FABRIC, YARN & THREAD MILLS	8.00	8.27	8.53	8.73	8.85	8.89	2.15
17. MISC. TEXTILE GOODS	2.80	2.92	3.05	3.16	3.23	3.27	3.18
18. APPAREL	3.57	3.59	3.66	3.72	3.72	3.71	0.80
19. MISC. FABRICATED TEXTILE PROD.	0.98	1.00	1.03	1.05	1.06	1.07	1.86
20. LUMBER & WOOD PRODUCTS	9.66	10.49	10.92	11.36	11.50	11.42	3.40
21. WOOD CONTAINERS	0.68	0.68	0.70	0.71	0.72	0.72	1.15
22. HOUSEHOLD FURNITURE	2.49	2.63	2.71	2.81	2.87	2.89	3.03
23. OTHER FURNITURE & FIXTURES	1.61	1.62	1.67	1.72	1.76	1.79	2.16
24. PAPER & ALLIED PRODUCTS	12.63	13.05	13.24	13.34	13.37	13.40	1.20
25. PAPERBOARD CONTAINERS & BOXES	5.49	5.72	5.93	6.12	6.26	6.38	3.04
26. PRINTING & PUBLISHING	7.10	7.11	7.14	7.17	7.18	7.18	0.22
27. CHEMICALS & PRODUCTS	22.30	22.68	23.00	23.19	23.29	23.39	0.96
28. PLASTICS & SYNTHETIC MATLS.	8.67	9.08	9.46	9.78	9.96	10.07	3.04
29. DRUGS, CLEANING & TOILET PREP.	5.61	5.66	5.76	5.85	5.87	5.90	1.04
30. PAINTS & ALLIED PRODUCTS	1.04	1.09	1.13	1.17	1.19	1.20	2.98
31. PET REFINING & REL. PROD.	5.19	5.18	5.21	5.26	5.27	5.27	0.32
32. RUBBER & MISC. PLASTICS PROD.	19.31	19.98	20.83	21.51	22.07	22.30	2.92
35. GLASS & GLASS PRODUCTS	4.61	4.68	4.75	4.77	4.74	4.68	0.29
36. STONE & CLAY PRODUCTS	15.32	15.63	15.90	16.30	16.37	16.18	1.09
37. PRIMARY FERROUS METALS	19.35	20.02	20.71	21.04	21.18	21.15	1.80
38. NONFERROUS METALS	13.62	14.13	14.70	15.13	15.38	15.60	2.74
39. METAL CONTAINERS	4.96	4.69	4.91	4.99	5.03	5.05	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	8.35	8.39	8.61	8.91	9.11	9.25	2.06
41. SCREW MACHINE PROD. & STAMPINGS	6.70	7.04	7.27	7.39	7.43	7.46	2.17
42. OTHER FAB. METAL PRODUCTS	5.85	6.03	6.29	6.48	6.62	6.77	2.95
43. ENGINES & TURBINES	1.23	1.38	1.43	1.44	1.45	1.46	1.77
44. FARM & GARDEN MACHINERY	1.88	1.93	2.02	2.05	2.08	2.10	2.27
45. CONSTR. & MINING MACHINERY	3.52	3.72	3.92	4.05	4.16	4.21	3.64
46. MATERIALS HANDLING MACH. & EQ.	1.26	1.30	1.38	1.43	1.47	1.50	3.62
47. METALWORKING MACH. & EQ.	2.60	2.71	2.87	2.99	3.07	3.13	3.76
48. SPECIAL INDUSTRY MACHINERY	1.62	1.65	1.73	1.81	1.85	1.89	3.21
49. GENERAL INDUSTRY MACHINERY	3.48	3.57	3.73	3.83	3.90	3.96	2.62

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
79. MAINT. MECH&REPAIRERS GEN UTIL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
50. MISC. NONELECTRICAL MACH.	1.64	1.68	1.75	1.79	1.80	1.83	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.95	2.02	2.11	2.15	2.18	2.23	2.73
52. SERVICE INDUSTRY MACHINES	1.99	2.07	2.17	2.20	2.21	2.21	2.10
53. ELECTRICAL MACHINERY	3.81	3.88	4.05	4.14	4.19	4.22	2.04
54. HOUSEHOLD APPLIANCES	2.22	2.28	2.34	2.42	2.48	2.51	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	3.77	3.79	3.89	3.99	4.05	4.10	1.70
56. RADIO, TV, & COMMUNICATION EQ.	3.73	3.82	3.93	4.00	4.03	4.09	1.85
57. ELECTRONIC COMPONENTS & ACCESS.	6.94	7.24	7.60	7.91	8.13	8.30	3.65
58. MISC. ELECTRICAL MACH. & EQ.	3.66	3.79	3.94	3.99	4.04	4.07	2.12
59. MOTOR VEHICLES & EQUIPMENT	13.62	14.24	14.72	14.96	15.12	15.21	2.23
60. AIRCRAFT & PARTS	4.60	4.78	4.91	5.07	5.08	5.08	2.00
61. OTHER TRANSPORTATION EQ.	3.05	3.14	3.25	3.32	3.33	3.36	1.94
62. INSTRUMENTS & SUPPLIES	4.86	4.96	5.17	5.39	5.55	5.65	3.06
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.21	2.24	2.34	2.44	2.52	2.58	3.17
64. MISC. MANUFACTURING	4.18	4.24	4.37	4.49	4.55	4.58	1.81
65. TRANSPORTATION & WAREHOUSING	16.58	16.94	17.28	17.69	17.79	17.78	1.41
66. COMMUNICATION EXC. RADIO & TV	2.16	2.19	2.25	2.28	2.34	2.37	1.80
68. UTILITIES	22.07	22.13	22.17	22.20	22.25	22.27	0.18
69. WHOLESALE & RETAIL TRADE	112.68	116.29	119.91	122.98	125.39	127.89	2.57
70. FINANCE & INSURANCE	8.71	8.90	9.12	9.40	9.69	9.96	2.73
71. REAL ESTATE & RENTAL	48.52	48.75	49.19	49.57	49.73	49.75	0.50
72. PERSONAL SERVICES EXC. AUTO.	58.01	59.70	61.65	63.63	65.61	67.45	3.06
73. BUSINESS SERVICES	10.07	10.47	10.91	11.42	11.86	12.23	3.96
74. EATING & DRINKING PLACES	2.35	2.39	2.43	2.45	2.47	2.48	1.05
75. AUTOMOBILE REPAIR & SERVICE	5.69	5.80	5.85	5.87	5.91	5.96	0.92
76. AMUSEMENTS	18.44	18.80	19.42	19.97	20.56	21.11	2.74
77. MISC. SERVICES	117.04	119.96	123.21	127.33	131.92	136.91	3.19
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	11.35	11.60	11.88	12.13	12.33	12.50	1.96
82. GOVERNMENT INDUSTRY	88.91	88.33	88.70	89.55	90.43	91.69	0.62
TOTAL, ALL INDUSTRIES	922.21	942.65	965.15	985.64	1,001.63	1,016.03	1.96

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
80. MARINE MECHANICS&REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
61. OTHER TRANSPORTATION EQ.	0.25	0.26	0.27	0.28	0.29	0.30	3.43
65. TRANSPORTATION & WAREHOUSING	0.15	0.16	0.16	0.17	0.18	0.18	2.57
69. WHOLESALE & RETAIL TRADE	0.02	0.03	0.03	0.03	0.04	0.04	9.53
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	12.06
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.04	0.05	0.05	0.05	1.71
82. GOVERNMENT INDUSTRY	0.88	0.86	0.88	0.90	0.92	0.92	0.85
TOTAL, ALL INDUSTRIES	1.36	1.37	1.40	1.44	1.47	1.49	1.81
TOTAL EMPLOYMENT							
61. OTHER TRANSPORTATION EQ.	0.86	0.89	0.92	0.94	0.94	0.95	2.02
65. TRANSPORTATION & WAREHOUSING	3.63	3.65	3.66	3.69	3.65	3.58	-0.30
69. WHOLESALE & RETAIL TRADE	4.01	4.13	4.26	4.36	4.45	4.53	2.49
72. PERSONAL SERVICES EXC. AUTO.	0.32	0.34	0.36	0.38	0.40	0.41	5.30
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.30	0.30	0.31	0.31	0.32	0.32	1.39
82. GOVERNMENT INDUSTRY	1.66	1.65	1.67	1.70	1.73	1.75	1.11
TOTAL, ALL INDUSTRIES	10.78	10.97	11.18	11.38	11.48	11.55	1.39

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
81. MILLWRIGHTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.67
6. NONFERROUS METAL MINING	0.03	0.04	0.04	0.05	0.05	0.05	10.47
11. NEW CONSTRUCTION	0.58	0.66	0.71	0.79	0.85	0.89	8.92
13. ORONANGE & ACCESSORIES	0.49	0.55	0.60	0.64	0.67	0.69	7.05
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	4.85
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.63
20. LUMBER & WOOD PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	8.62
24. PAPER & ALLIED PRODUCTS	0.15	0.17	0.18	0.20	0.21	0.21	6.88
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.77
27. CHEMICALS & PRODUCTS	0.13	0.14	0.15	0.16	0.18	0.19	8.29
28. PLASTICS & SYNTHETIC MATLS.	0.03	0.04	0.04	0.04	0.05	0.05	8.70
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.79
32. RUBBER & MISC. PLASTICS PROD.	0.03	0.03	0.04	0.04	0.04	0.05	10.41
35. GLASS & GLASS PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	8.38
36. STONE & CLAY PRODUCTS	0.03	0.04	0.04	0.04	0.04	0.05	7.35
37. PRIMARY FERROUS METALS	0.77	0.85	0.91	0.99	1.05	1.09	7.10
38. NONFERROUS METALS	0.23	0.27	0.29	0.33	0.35	0.37	9.82
39. METAL CONTAINERS	0.01	0.01	0.01	0.02	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.08	0.09	0.10	0.10	0.11	0.12	7.78
41. SCREW MACHINE PROD. & STAMPINGS	0.16	0.18	0.19	0.21	0.22	0.23	7.69
42. OTHER FAB. METAL PRODUCTS	0.04	0.05	0.06	0.06	0.07	0.07	9.66
43. ENGINES & TURBINES	0.04	0.05	0.05	0.05	0.06	0.06	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.02	0.02	0.02	9.12
47. METALWORKING MACH. & EQ.	0.03	0.04	0.04	0.05	0.05	0.05	9.35
49. GENERAL INDUSTRY MACHINERY	0.04	0.04	0.05	0.05	0.05	0.06	7.52
50. MISC. NONELECTRICAL MACH.	0.03	0.04	0.04	0.04	0.05	0.05	7.52
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.02	13.36
53. ELECTRICAL MACHINERY	0.05	0.05	0.06	0.06	0.07	0.07	9.28
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.02	0.02	0.03	0.03	0.03	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.35	0.40	0.44	0.48	0.50	0.51	8.00
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.10	0.11	0.12	0.13	0.14	11.36
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.03	0.03	0.03	0.03	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.17	0.21	0.23	0.28	0.32	0.38	17.14
60. AIRCRAFT & PARTS	0.51	0.57	0.63	0.70	0.74	0.76	8.60
61. OTHER TRANSPORTATION EQ.	0.13	0.13	0.14	0.14	0.14	0.15	2.92
62. INSTRUMENTS & SUPPLIES	0.04	0.04	0.04	0.05	0.05	0.05	8.27

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
81. MILLWRIGHTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
65. TRANSPORTATION & WAREHOUSING	0.02	0.02	0.02	0.02	0.02	0.03	6.41
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.04	0.05	0.05	0.05	5.59
82. GOVERNMENT INDUSTRY	0.14	0.14	0.14	0.15	0.15	0.15	0.92
TOTAL. ALL INDUSTRIES	4.68	5.25	5.70	6.22	6.65	6.94	8.18
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.17	0.19	0.20	0.20	0.19	0.19	1.52
6. NONFERROUS METAL MINING	0.55	0.58	0.60	0.61	0.60	0.60	1.93
11. NEW CONSTRUCTION	15.52	15.89	16.25	16.81	17.26	17.54	2.48
13. ORNANCE & ACCESSORIES	0.81	0.82	0.83	0.85	0.85	0.85	0.99
14. FOOD & KINDRED PRODUCTS	0.88	0.89	0.90	0.89	0.88	0.87	-0.25
16. FABRIC, YARN & THREAD MILLS	0.49	0.51	0.52	0.54	0.54	0.55	2.22
20. LUMBER & WOOD PRODUCTS	2.86	3.08	3.19	3.30	3.32	3.28	2.82
24. PAPER & ALLIED PRODUCTS	8.24	8.51	8.62	8.66	8.67	8.68	1.03
25. PAPERBOARD CONTAINERS & BOXES	0.30	0.31	0.32	0.32	0.32	0.33	1.71
27. CHEMICALS & PRODUCTS	2.60	2.66	2.72	2.77	2.80	2.83	1.73
28. PLASTICS & SYNTHETIC MATLS.	1.36	1.40	1.46	1.49	1.51	1.52	2.31
31. PET REFINING & REL. PROD.	0.16	0.15	0.16	0.16	0.16	0.15	-0.12
32. RUBBER & MISC. PLASTICS PROD.	1.04	1.07	1.12	1.16	1.19	1.20	2.97
35. GLASS & GLASS PRODUCTS	0.85	0.86	0.87	0.87	0.86	0.84	-0.25
36. STONE & CLAY PRODUCTS	1.00	1.01	1.02	1.03	1.03	1.01	0.18
37. PRIMARY FERROUS METALS	10.82	11.07	11.34	11.40	11.37	11.25	0.78
38. NONFERROUS METALS	2.74	2.85	2.98	3.08	3.14	3.20	3.20
39. METAL CONTAINERS	0.89	0.88	0.88	0.90	0.90	0.91	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	1.81	1.82	1.86	1.93	1.97	2.00	2.03
41. SCREW MACHINE PROD. & STAMPINGS	2.57	2.70	2.79	2.84	2.85	2.86	2.16
42. OTHER FAB. METAL PRODUCTS	0.96	0.99	1.04	1.07	1.09	1.12	2.97
43. ENGINES & TURBINES	0.50	0.51	0.53	0.54	0.54	0.54	1.77
45. CONSTR. & MINING MACHINERY	0.78	0.83	0.87	0.90	0.93	0.94	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.28	0.29	0.31	0.32	0.33	0.34	3.63
47. METALWORKING MACH. & EQ.	0.65	0.67	0.71	0.74	0.76	0.78	3.75
49. GENERAL INDUSTRY MACHINERY	0.88	0.90	0.94	0.97	0.98	1.00	2.63
50. MISC. NONELECTRICAL MACH.	0.29	0.29	0.31	0.31	0.32	0.32	2.21
52. SERVICE INDUSTRY MACHINES	0.46	0.48	0.51	0.51	0.52	0.52	2.10
53. ELECTRICAL MACHINERY	0.92	0.93	0.98	1.00	1.01	1.02	2.22
55. ELECTRIC LIGHTING & WIRING EQ.	0.39	0.40	0.41	0.42	0.42	0.43	1.70
56. RADIO, TV, & COMMUNICATION EQ.	0.82	0.84	0.87	0.88	0.89	0.90	1.86
57. ELECTRONIC COMPONENTS & ACCESS.	0.37	0.38	0.40	0.42	0.43	0.44	3.64



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
81. MILLWRIGHTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
58. MISC. ELECTRICAL MACH. & EQ.	0.77	0.80	0.83	0.84	0.85	0.86	2.12
59. MOTOR VEHICLES & EQUIPMENT	8.88	9.29	9.60	9.76	9.86	9.92	2.23
60. AIRCRAFT & PARTS	1.01	1.05	1.08	1.12	1.12	1.12	2.01
61. OTHER TRANSPORTATION EQ.	0.44	0.45	0.46	0.47	0.47	0.47	1.51
62. INSTRUMENTS & SUPPLIES	0.31	0.31	0.33	0.34	0.35	0.36	2.81
65. TRANSPORTATION & WAREHOUSING	0.44	0.46	0.47	0.49	0.51	0.52	3.43
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.64	0.66	0.68	0.70	0.70	0.71	1.92
82. GOVERNMENT INDUSTRY	0.44	0.44	0.44	0.45	0.46	0.47	1.15
TOTAL, ALL INDUSTRIES	81.30	83.78	86.07	87.87	88.90	89.42	1.92

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
82. TELEPHONE INSTALLERS & REPAIRERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
66. COMMUNICATION EXC. RADIO & TV	6.37	6.72	7.11	7.63	8.03	8.16	5.10
82. GOVERNMENT INDUSTRY	1.50	1.47	1.50	1.54	1.56	1.57	0.86
TOTAL, ALL INDUSTRIES	7.87	8.19	8.60	9.17	9.59	9.73	4.34
TOTAL EMPLOYMENT							
66. COMMUNICATION EXC. RADIO & TV	256.62	258.36	264.38	266.90	272.86	275.10	1.40
82. GOVERNMENT INDUSTRY	2.77	2.77	2.80	2.85	2.90	2.94	1.21
TOTAL, ALL INDUSTRIES	259.42	261.16	267.21	269.79	275.80	278.08	1.40

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
83. MECHANICS REPAIRERS INSTALL. NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.79
4. AGR., FORESTRY, & FISHERY SERV.	0.01	0.01	0.01	0.01	0.01	0.01	6.86
5. IRON ORE MINING	0.10	0.11	0.12	0.13	0.14	0.14	7.88
6. NONFERROUS METAL MINING	0.10	0.12	0.13	0.14	0.16	0.17	10.74
7. COAL MINING	0.38	0.44	0.48	0.52	0.57	0.60	9.24
8. CRUDE PETROLEUM & N. GAS	0.03	0.03	0.03	0.03	0.04	0.04	4.63
9. STONE & CLAY MINING & QUARRYING	0.03	0.04	0.04	0.05	0.05	0.05	10.34
10. CHEM & FERTILIZER MIN. MINING	0.02	0.02	0.02	0.02	0.02	0.03	7.91
11. NEW CONSTRUCTION	3.43	3.90	4.21	4.68	5.05	5.32	9.17
13. ORNANCE & ACCESSORIES	1.01	1.15	1.25	1.36	1.43	1.49	8.00
14. FOOD & KINDRED PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05	4.49
16. FABRIC, YARN & THREAD MILLS	0.34	0.36	0.38	0.39	0.41	0.42	4.08
17. MISC. TEXTILE GOODS	0.02	0.03	0.03	0.03	0.03	0.03	6.83
18. APPAREL	0.07	0.07	0.08	0.08	0.09	0.09	8.24
19. MISC. FABRICATED TEXTILE PROD.	0.04	0.04	0.05	0.05	0.05	0.05	4.69
20. LUMBER & WOOD PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	8.77
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.85
27. CHEMICALS & PRODUCTS	0.08	0.09	0.09	0.10	0.11	0.11	7.39
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.02	0.02	0.03	0.03	8.71
31. PET REFINING & REL. PRDD.	0.02	0.02	0.02	0.02	0.02	0.02	5.41
32. RUBBER & MISC. PLASTICS PROD.	0.01	0.02	0.02	0.02	0.02	0.02	10.43
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	7.57
36. STONE & CLAY PRODUCTS	0.04	0.04	0.05	0.05	0.05	0.05	7.03
37. PRIMARY FERROUS METALS	0.12	0.13	0.14	0.15	0.16	0.17	7.32
38. NONFERROUS METALS	0.08	0.10	0.11	0.12	0.13	0.13	10.09
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	6.62
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.05	7.74
41. SCREW MACHINE PROD. & STAMPINGS	0.02	0.02	0.02	0.02	0.03	0.03	7.69
42. OTHER FAB. METAL PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	9.62
43. ENGINES & TURBINES	0.07	0.08	0.09	0.09	0.10	0.10	7.72
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.02	0.02	6.54
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.03	0.03	0.03	0.04	0.04	8.40
49. GENERAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	7.52
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.55
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.04	0.04	0.05	0.05	0.05	7.33
52. SERVICE INDUSTRY MACHINES	0.01	0.02	0.02	0.02	0.02	0.03	13.38
53. ELECTRICAL MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	9.23

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
83. MECHANICS REPAIRERS INSTALL. NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH
							82 TO 87
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.04	0.04	0.04	0.04	8.24
56. RADIO, TV, & COMMUNICATION EQ.	0.24	0.28	0.30	0.33	0.34	0.35	7.68
57. ELECTRONIC COMPONENTS & ACCESS.	0.10	0.12	0.14	0.15	0.17	0.17	11.36
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.02	0.02	0.02	0.03	17.13
60. AIRCRAFT & PARTS	1.18	1.34	1.48	1.63	1.74	1.79	8.59
61. OTHER TRANSPORTATION EQ.	0.44	0.47	0.48	0.49	0.51	0.52	3.28
62. INSTRUMENTS & SUPPLIES	0.07	0.07	0.08	0.09	0.09	0.10	8.49
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.46
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	8.91
65. TRANSPORTATION & WAREHOUSING	1.73	1.80	1.85	1.92	1.97	1.97	2.64
66. COMMUNICATION EXC. RADIO & TV	1.91	2.02	2.13	2.29	2.41	2.46	5.19
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.22
68. UTILITIES	2.50	2.73	2.93	3.14	3.29	3.34	6.00
69. WHOLESALE & RETAIL TRADE	1.65	1.88	2.08	2.32	2.52	2.67	10.09
70. FINANCE & INSURANCE	0.01	0.01	0.01	0.01	0.01	0.01	9.69
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.02	0.02	0.02	7.02
72. PERSONAL SERVICES EXC. AUTO.	1.45	1.65	1.81	1.99	2.14	2.26	9.26
73. BUSINESS SERVICES	0.42	0.46	0.50	0.54	0.58	0.59	7.39
74. EATING & DRINKING PLACES	0.01	0.02	0.02	0.02	0.02	0.02	9.80
75. AUTOMOBILE REPAIR & SERVICE	0.03	0.03	0.03	0.03	0.04	0.04	6.77
76. AMUSEMENTS	0.12	0.13	0.14	0.15	0.16	0.17	8.23
77. MISC. SERVICES	0.17	0.17	0.18	0.19	0.19	0.20	3.24
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	9.99	10.14	10.51	10.99	11.31	11.48	2.82
82. GOVERNMENT INDUSTRY	35.09	34.48	35.22	36.27	36.94	37.27	1.21
TOTAL, ALL INDUSTRIES	63.60	65.10	67.80	71.24	73.77	75.19	3.40
TOTAL EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	5.15	5.17	5.19	5.18	5.17	5.16	0.05
4. AGR., FORESTRY, & FISHERY SERV.	0.41	0.42	0.43	0.44	0.44	0.45	1.76
5. IRON ORE MINING	1.92	2.06	2.20	2.18	2.14	2.09	1.72
6. NONFERROUS METAL MINING	1.70	1.79	1.86	1.90	1.89	1.90	2.18
7. COAL MINING	13.70	14.43	14.99	15.39	15.92	16.29	3.53
8. CRUDE PETROLEUM & N. GAS	0.40	0.40	0.40	0.40	0.39	0.40	-0.17
9. STONE & CLAY MINING & QUARRYING	1.06	1.08	1.12	1.17	1.20	1.22	2.91
10. CHEM. & FERTILIZER MIN. MINING	0.87	0.89	0.92	0.94	0.95	0.96	2.01
11. NEW CONSTRUCTION	91.36	93.76	96.14	99.67	102.54	104.43	2.71
13. ORDNANCE & ACCESSORIES	1.68	1.72	1.75	1.79	1.82	1.84	1.89
14. FOOD & KINDRED PRODUCTS	5.85	5.90	5.90	5.85	5.76	5.68	-0.60

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
83. MECHANICS REPAIRERS INSTALL. NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
16. FABRIC, YARN & THREAD MILLS	27.37	27.91	28.37	28.64	28.81	28.37	0.71
17. MISC. TEXTILE GOODS	1.59	1.85	1.71	1.78	1.79	1.79	2.44
18. APPAREL	19.29	19.49	19.96	20.37	20.43	20.47	1.19
19. MISC. FABRICATED TEXTILE PROD.	1.43	1.46	1.50	1.53	1.55	1.57	1.87
20. LUMBER & WOOD PRODUCTS	0.86	0.92	0.96	0.99	1.00	0.99	2.97
24. PAPER & ALLIED PRODUCTS	0.46	0.49	0.50	0.50	0.50	0.50	1.01
27. CHEMICALS & PRODUCTS	1.83	1.68	1.68	1.70	1.70	1.71	0.89
28. PLASTICS & SYNTHETIC MATLS.	0.72	0.74	0.77	0.79	0.80	0.80	2.32
31. PET REFINING & REL. PROD.	0.33	0.33	0.34	0.34	0.34	0.34	0.48
32. RUBBER & MISC. PLASTICS PROD.	0.54	0.56	0.59	0.61	0.62	0.63	3.00
35. GLASS & GLASS PRODUCTS	0.53	0.53	0.53	0.53	0.52	0.50	-1.00
36. STONE & CLAY PRODUCTS	1.20	1.21	1.22	1.23	1.23	1.20	-0.12
37. PRIMARY FERROUS METALS	1.63	1.67	1.71	1.73	1.73	1.71	0.98
38. NONFERROUS METALS	0.98	1.03	1.08	1.12	1.14	1.17	3.46
39. METAL CONTAINERS	0.51	0.50	0.50	0.51	0.51	0.52	0.37
40. FAB. STRUCTURAL METAL PRODUCTS	0.78	0.78	0.80	0.83	0.85	0.86	1.99
41. SCREW MACHINE PROD. & STAMPINGS	0.30	0.32	0.33	0.33	0.33	0.34	2.17
42. OTHER FAB. METAL PRODUCTS	0.47	0.48	0.51	0.52	0.53	0.54	2.92
43. ENGINES & TURBINES	0.83	0.85	0.88	0.89	0.90	0.90	1.78
45. CONSTR. & MINING MACHINERY	1.27	1.33	1.39	1.43	1.46	1.47	2.96
46. MATERIALS HANDLING MACH. & EQ.	0.45	0.47	0.49	0.51	0.52	0.52	2.94
49. GENERAL INDUSTRY MACHINERY	0.75	0.76	0.80	0.82	0.84	0.85	2.62
50. MISC. NONELECTRICAL MACH.	0.08	0.09	0.09	0.09	0.09	0.09	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	0.95	0.98	1.03	1.04	1.06	1.08	2.73
52. SERVICE INDUSTRY MACHINES	0.79	0.82	0.86	0.87	0.87	0.87	2.11
53. ELECTRICAL MACHINERY	0.27	0.28	0.29	0.29	0.30	0.30	2.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.63	0.63	0.65	0.67	0.68	0.68	1.89
56. RADIO, TV, & COMMUNICATION EQ.	0.57	0.58	0.60	0.61	0.61	0.62	1.55
57. ELECTRONIC COMPONENTS & ACCESS.	0.47	0.49	0.51	0.53	0.54	0.56	3.64
59. MOTOR VEHICLES & EQUIPMENT	0.84	0.87	0.89	0.70	0.71	0.72	2.22
60. AIRCRAFT & PARTS	2.37	2.47	2.53	2.61	2.62	2.62	2.00
61. OTHER TRANSPORTATION EQ.	1.53	1.58	1.63	1.67	1.67	1.68	1.88
62. INSTRUMENTS & SUPPLIES	0.56	0.57	0.60	0.62	0.64	0.65	3.02
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.06	1.08	1.12	1.17	1.21	1.24	3.10
64. MISC. MANUFACTURING	0.77	0.80	0.85	0.90	0.94	0.97	4.78
65. TRANSPORTATION & WAREHOUSING	40.85	40.89	41.03	41.33	40.88	40.18	-0.23
66. COMMUNICATION EXC. RADIO & TV	78.94	77.53	79.40	80.23	82.09	82.83	1.49
67. RADIO & TV BROADCASTING	0.33	0.34	0.35	0.36	0.36	0.36	1.78
68. UTILITIES	118.04	118.18	118.24	118.28	118.39	118.34	0.05

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
83. MECHANICS REPAIRERS INSTALL. NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	269.47	279.45	289.47	298.18	305.30	312.66	3.02
70. FINANCE & INSURANCE	0.70	0.71	0.73	0.75	0.77	0.79	2.59
71. REAL ESTATE & RENTAL	0.44	0.45	0.45	0.46	0.46	0.46	0.72
72. PERSONAL SERVICES EXC. AUTO.	79.33	81.28	83.61	85.96	88.32	90.49	2.87
73. BUSINESS SERVICES	8.57	8.73	8.92	9.16	9.35	9.48	2.06
74. EATING & DRINKING PLACES	0.93	0.94	0.96	0.97	0.98	0.98	1.11
75. AUTOMOBILE REPAIR & SERVICE	1.81	1.83	1.84	1.84	1.84	1.85	0.49
76. AMUSEMENTS	11.88	12.02	12.33	12.60	12.89	13.15	2.06
77. MISC. SERVICES	25.89	26.01	26.21	26.59	27.07	27.82	1.30
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	141.52	144.25	147.44	150.48	153.10	155.25	1.87
82. GOVERNMENT INDUSTRY	115.06	114.81	115.90	117.86	119.83	121.64	1.12
TOTAL, ALL INDUSTRIES	1,097.24	1,118.36	1,143.08	1,166.68	1,187.04	1,203.68	1.87

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
84. METALWORKING CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.02	0.02	0.02	0.02	0.02	0.02	7.73
6. NONFERROUS METAL MINING	0.09	0.11	0.12	0.13	0.14	0.15	11.39
7. COAL MINING	0.02	0.03	0.03	0.03	0.03	0.03	9.08
8. CRUDE PETROLEUM & N. GAS	0.06	0.08	0.07	0.07	0.08	0.08	4.97
9. STONE&CLAY MINING & QUARRYING	0.01	0.01	0.01	0.01	0.01	0.01	9.55
11. NEW CONSTRUCTION	3.88	4.36	4.67	5.13	5.49	5.73	8.11
13. ORDNANCE & ACCESSORIES	4.33	4.89	5.33	5.75	6.06	6.28	7.72
14. FOOD & KINDRED PRODUCTS	0.05	0.05	0.05	0.05	0.06	0.06	5.08
18. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.04	0.04	0.04	0.04	4.92
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	7.11
19. MISC. FABRICATED TEXTILE PROD.	0.02	0.02	0.02	0.02	0.02	0.03	4.68
20. LUMBER & WOOD PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.05	9.87
21. WOOD CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	9.81
22. HOUSEHOLD FURNITURE	0.01	0.01	0.01	0.01	0.01	0.01	3.71
23. OTHER FURNITURE & FIXTURES	0.06	0.07	0.07	0.07	0.08	0.08	4.53
24. PAPER & ALLIED PRODUCTS	0.10	0.11	0.12	0.13	0.14	0.14	6.71
25. PAPERBOARD CONTAINERS & BOXES	0.05	0.06	0.07	0.07	0.08	0.08	8.77
26. PRINTING & PUBLISHING	0.05	0.05	0.06	0.06	0.06	0.06	5.85
27. CHEMICALS & PRODUCTS	0.21	0.23	0.25	0.27	0.29	0.31	7.92
28. PLASTICS & SYNTHETIC MATLS.	0.07	0.08	0.08	0.09	0.10	0.10	8.70
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.02	4.19
30. PAINTS & ALLIED PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	8.21
31. PET REFINING & REL. PROD.	0.19	0.20	0.21	0.23	0.24	0.25	5.24
32. RUBBER & MISC. PLASTICS PROD.	0.40	0.44	0.49	0.55	0.59	0.62	9.52
35. GLASS & GLASS PRODUCTS	0.09	0.10	0.11	0.12	0.12	0.13	8.41
36. STONE & CLAY PRODUCTS	0.13	0.14	0.15	0.17	0.18	0.18	7.65
37. PRIMARY FERROUS METALS	3.11	3.43	3.68	3.98	4.20	4.35	6.91
38. NONFERROUS METALS	2.30	2.83	2.88	3.16	3.40	3.55	9.09
39. METAL CONTAINERS	0.07	0.07	0.08	0.08	0.09	0.09	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	2.17	2.43	2.59	2.77	2.92	3.07	7.13
41. SCREW MACHINE PROD. & STAMPINGS	2.30	2.55	2.73	2.96	3.13	3.24	7.12
42. OTHER FAB. METAL PRODUCTS	0.79	0.90	0.99	1.10	1.19	1.28	9.71
43. ENGINES & TURBINES	0.43	0.49	0.54	0.57	0.60	0.63	7.85
44. FARM & GARDEN MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	8.21
45. CONSTR. & MINING MACHINERY	0.18	0.17	0.19	0.20	0.21	0.22	7.08
48. MATERIALS HANDLING MACH. & EQ.	0.27	0.31	0.33	0.37	0.39	0.41	8.96
47. METALWORKING MACH. & EQ.	3.19	3.66	4.02	4.44	4.76	4.96	9.22

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
84. METALWORKING CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
48. SPECIAL INDUSTRY MACHINERY	0.10	0.11	0.12	0.14	0.16	0.17	12.06
49. GENERAL INDUSTRY MACHINERY	0.94	1.05	1.13	1.21	1.29	1.34	7.37
50. MISC. NONELECTRICAL MACH.	3.00	3.28	3.61	3.97	4.23	4.37	7.80
51. OFFICE, COMPUTING & ACCT. MACH.	0.22	0.28	0.28	0.29	0.30	0.31	6.71
52. SERVICE INDUSTRY MACHINES	0.17	0.20	0.22	0.25	0.29	0.32	13.37
53. ELECTRICAL MACHINERY	0.61	0.70	0.76	0.83	0.89	0.93	8.75
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.02	0.02	0.02	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.40	0.45	0.48	0.52	0.55	0.57	7.36
56. RADIO, TV, & COMMUNICATION EQ.	5.11	5.80	6.30	6.76	7.03	7.11	6.84
57. ELECTRONIC COMPONENTS & ACCESS.	2.03	2.41	2.71	3.02	3.28	3.43	11.04
58. MISC. ELECTRICAL MACH. & EQ.	0.13	0.15	0.17	0.19	0.20	0.21	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.75	0.90	1.02	1.21	1.41	1.65	17.13
60. AIRCRAFT & PARTS	13.08	14.79	16.29	17.97	19.22	19.72	8.56
61. OTHER TRANSPORTATION EQ.	4.34	4.57	4.72	4.82	4.97	5.13	3.41
62. INSTRUMENTS & SUPPLIES	1.66	1.87	2.03	2.22	2.37	2.45	8.12
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.20	0.22	0.24	0.27	0.29	0.31	8.58
64. MISC. MANUFACTURING	0.10	0.11	0.11	0.12	0.12	0.13	5.17
65. TRANSPORTATION & WAREHOUSING	0.73	0.78	0.78	0.81	0.83	0.83	2.58
68. UTILITIES	0.13	0.14	0.15	0.16	0.16	0.17	6.00
69. WHOLESALE & RETAIL TRADE	0.11	0.12	0.13	0.15	0.16	0.17	9.52
72. PERSONAL SERVICES EXC. AUTO.	0.38	0.45	0.50	0.57	0.63	0.68	12.29
73. BUSINESS SERVICES	0.18	0.20	0.22	0.24	0.25	0.26	7.86
75. AUTOMOBILE REPAIR & SERVICE	0.08	0.08	0.09	0.10	0.10	0.10	6.79
77. MISC. SERVICES	0.06	0.06	0.06	0.06	0.06	0.07	3.43
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.56	2.69	2.83	2.98	3.07	3.11	3.97
82. GOVERNMENT INDUSTRY	28.49	27.91	28.39	29.11	29.52	29.66	-0.81
TOTAL, ALL INDUSTRIES	90.32	97.13	103.48	110.78	116.33	119.57	5.77
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.33	0.36	0.38	0.38	0.37	0.36	1.58
6. NONFERROUS METAL MINING	1.54	1.64	1.71	1.76	1.75	1.77	2.78
7. COAL MINING	0.80	0.84	0.87	0.89	0.92	0.94	3.38
8. CRUDE PETROLEUM & N. GAS	0.82	0.82	0.83	0.82	0.81	0.82	0.15
9. STONE & CLAY MINING & QUARRYING	0.28	0.28	0.29	0.30	0.31	0.31	2.18
11. NEW CONSTRUCTION	103.31	104.91	106.48	109.32	111.44	112.48	1.72
13. ORNANCE & ACCESSORIES	7.17	7.32	7.44	7.60	7.69	7.77	1.62
14. FOOD & KINDRED PRODUCTS	6.80	6.89	6.93	6.91	6.84	6.78	-0.04
16. FABRIC, YARN & THREAD MILLS	2.51	2.58	2.65	2.70	2.71	2.71	1.53



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
84. METALWORKING CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
17. MISC. TEXTILE GOODS	0.71	0.74	0.77	0.80	0.81	0.81	2.72
19. MISC. FABRICATED TEXTILE PROD.	0.69	0.71	0.73	0.74	0.75	0.76	1.86
20. LUMBER & WOOD PRODUCTS	1.60	1.75	1.83	1.92	1.95	1.95	4.01
21. WOOD CONTAINERS	0.09	0.09	0.09	0.10	0.10	0.10	1.15
22. HOUSEHOLD FURNITURE	1.53	1.61	1.66	1.72	1.76	1.77	3.04
23. OTHER FURNITURE & FIXTURES	3.98	4.00	4.12	4.24	4.33	4.42	2.12
24. PAPER & ALLIED PRODUCTS	5.42	5.58	5.64	5.66	5.66	5.66	0.87
25. PAPERBOARD CONTAINERS & BOXES	2.42	2.48	2.54	2.59	2.62	2.63	1.71
26. PRINTING & PUBLISHING	3.06	3.07	3.08	3.10	3.10	3.10	0.25
27. CHEMICALS & PRODUCTS	4.34	4.43	4.51	4.57	4.61	4.65	1.39
28. PLASTICS & SYNTHETIC MATLS.	2.79	2.89	3.00	3.07	3.12	3.13	2.31
29. DRUGS, CLEANING & TOILET PREP.	3.50	3.53	3.58	3.63	3.63	3.64	0.78
30. PAINTS & ALLIED PRODUCTS	0.34	0.35	0.37	0.38	0.39	0.39	2.98
31. PET REFINING & REL. PROD.	3.55	3.54	3.56	3.60	3.60	3.60	0.30
32. RUBBER & MISC. PLASTICS PROD.	14.54	14.92	15.43	15.82	16.11	16.17	2.15
35. GLASS & GLASS PRODUCTS	3.95	3.99	4.02	4.02	3.98	3.91	-0.22
36. STONE & CLAY PRODUCTS	3.94	4.00	4.04	4.12	4.11	4.04	0.46
37. PRIMARY FERROUS METALS	43.69	44.61	45.60	45.77	45.56	45.00	0.59
38. NONFERROUS METALS	27.14	28.08	29.15	29.94	30.35	30.72	2.51
39. METAL CONTAINERS	4.60	4.53	4.54	4.62	4.66	4.68	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	48.71	48.58	49.53	50.95	51.80	52.26	1.42
41. SCREW MACHINE PROD. & STAMPINGS	37.43	39.10	40.14	40.60	40.60	40.56	1.62
42. OTHER FAB. METAL PRODUCTS	17.19	17.73	18.50	19.08	19.50	19.94	3.01
43. ENGINES & TURBINES	5.19	5.36	5.57	5.63	5.67	5.70	1.90
44. FARM & GARDEN MACHINERY	4.56	4.69	4.94	5.01	5.07	5.13	2.37
45. CONSTR. & MINING MACHINERY	13.13	13.86	14.56	15.06	15.44	15.59	3.49
46. MATERIALS HANDLING MACH. & EQ.	4.69	4.84	5.12	5.32	5.46	5.57	3.47
47. METALWORKING MACH. & EQ.	62.04	64.47	68.22	70.90	72.86	74.15	3.63
48. SPECIAL INDUSTRY MACHINERY	13.38	13.66	14.34	14.98	15.35	15.67	3.22
49. GENERAL INDUSTRY MACHINERY	21.37	21.87	22.87	23.45	23.81	24.16	2.49
50. MISC. NONELECTRICAL MACH.	26.22	26.98	28.19	28.89	29.23	29.63	2.47
51. OFFICE, COMPUTING & ACCT. MACH.	5.96	6.15	6.37	6.45	6.51	6.62	2.14
52. SERVICE INDUSTRY MACHINES	9.50	9.87	10.34	10.51	10.54	10.54	2.11
53. ELECTRICAL MACHINERY	12.31	12.48	13.00	13.25	13.35	13.41	1.72
54. HOUSEHOLD APPLIANCES	4.47	4.59	4.71	4.87	4.98	5.05	2.47
55. ELECTRIC LIGHTING & WIRING EQ.	8.42	8.39	8.55	8.68	8.74	8.79	0.87
56. RADIO, TV, & COMMUNICATION EQ.	12.09	12.22	12.46	12.53	12.50	12.56	0.77
57. ELECTRONIC COMPONENTS & ACCESS.	9.27	9.64	10.09	10.47	10.74	10.93	3.34
58. MISC. ELECTRICAL MACH. & EQ.	4.95	5.12	5.32	5.39	5.45	5.50	2.12

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
84. METALWORKING CRAFTS WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
59. MOTOR VEHICLES & EQUIPMENT	38.78	40.64	41.91	42.58	43.05	43.29	2.22
60. AIRCRAFT & PARTS	26.20	27.24	27.97	28.84	28.91	28.88	1.97
61. OTHER TRANSPORTATION EQ.	14.96	15.41	15.97	16.32	16.37	16.52	2.00
62. INSTRUMENTS & SUPPLIES	14.24	14.47	15.03	15.60	15.99	16.24	2.66
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	4.68	4.74	4.95	5.17	5.34	5.48	3.21
64. MISC. MANUFACTURING	8.84	8.90	9.12	9.30	9.37	9.37	1.16
65. TRANSPORTATION & WAREHOUSING	17.22	17.31	17.36	17.47	17.27	16.97	-0.29
68. UTILITIES	5.82	5.82	5.83	5.83	5.83	5.83	0.05
69. WHOLESALE & RETAIL TRADE	17.38	17.92	18.47	18.92	19.28	19.65	2.48
72. PERSONAL SERVICES EXC. AUTO.	20.85	22.08	23.37	24.69	26.01	27.28	5.52
73. BUSINESS SERVICES	3.70	3.79	3.89	4.02	4.12	4.19	2.51
75. AUTOMOBILE REPAIR & SERVICE	5.18	5.26	5.28	5.28	5.29	5.32	0.51
77. MISC. SERVICES	8.57	8.63	8.71	8.86	9.03	9.23	1.49
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	22.08	22.80	23.26	23.81	24.15	24.37	1.99
82. GOVERNMENT INDUSTRY	65.96	65.85	66.52	67.77	69.00	69.97	1.19
TOTAL, ALL INDUSTRIES	854.62	874.57	900.22	921.47	934.56	943.32	1.99

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
85. BLACKSMITHS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
37. PRIMARY FERROUS METALS	0.02	0.03	0.03	0.03	0.03	0.04	7.41
38. NONFERROUS METALS	0.01	0.01	0.01	0.01	0.01	0.01	10.26
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.39
41. SCREW MACHINE PROD.&STAMPINGS	0.01	0.02	0.02	0.02	0.02	0.02	7.67
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.34
65. TRANSPORTATION & WAREHOUSING	0.03	0.03	0.03	0.03	0.03	0.03	2.23
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.43	0.44	0.45	0.47	0.49	0.49	2.80
82. GOVERNMENT INDUSTRY	0.16	0.16	0.16	0.17	0.17	0.17	0.84
TOTAL, ALL INDUSTRIES	0.69	0.71	0.74	0.77	0.79	0.80	2.96
TOTAL EMPLOYMENT							
37. PRIMARY FERROUS METALS	0.34	0.35	0.36	0.37	0.37	0.36	1.06
38. NONFERROUS METALS	0.09	0.10	0.10	0.11	0.11	0.11	3.61
40. FAB. STRUCTURAL METAL PRODUCTS	0.13	0.13	0.13	0.14	0.14	0.14	1.67
41. SCREW MACHINE PROD.&STAMPINGS	0.24	0.25	0.26	0.27	0.27	0.27	2.14
47. METALWORKING MACH. & EQ.	0.14	0.14	0.15	0.15	0.16	0.16	3.74
65. TRANSPORTATION & WAREHOUSING	0.66	0.67	0.67	0.67	0.66	0.64	-0.63
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.23	3.29	3.37	3.44	3.46	3.47	1.45
82. GOVERNMENT INDUSTRY	0.37	0.37	0.37	0.38	0.39	0.39	1.27
TOTAL, ALL INDUSTRIES	5.62	5.73	5.87	5.98	6.03	6.04	1.45

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
86. BOILERMAKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.02	0.02	0.02	10.63
11. NEW CONSTRUCTION	0.56	0.62	0.66	0.72	0.76	0.78	6.71
13. ORDNANCE & ACCESSORIES	0.02	0.02	0.02	0.02	0.02	0.02	6.90
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.54
27. CHEMICALS & PRODUCTS	0.03	0.04	0.04	0.04	0.05	0.05	8.06
31. PET REFINING & REL. PROD.	0.06	0.06	0.07	0.07	0.08	0.08	5.24
37. PRIMARY FERROUS METALS	0.12	0.13	0.14	0.15	0.16	0.16	6.91
38. NONFERROUS METALS	0.02	0.03	0.03	0.04	0.04	0.04	10.64
40. FAB. STRUCTURAL METAL PRODUCTS	0.10	0.11	0.12	0.13	0.13	0.14	6.98
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.10
49. GENERAL INDUSTRY MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	7.54
56. RADIO, TV. & COMMUNICATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.53
61. OTHER TRANSPORTATION EQ.	0.65	0.69	0.71	0.72	0.74	0.77	3.33
65. TRANSPORTATION & WAREHOUSING	0.05	0.05	0.05	0.05	0.05	0.05	2.14
68. UTILITIES	0.05	0.05	0.06	0.06	0.07	0.07	5.87
72. PERSONAL SERVICES EXC. AUTO.	0.08	0.09	0.11	0.12	0.13	0.14	12.47
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	4.44
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.05	0.05	0.05	0.05	0.05	0.06	2.88
82. GOVERNMENT INDUSTRY	1.41	1.38	1.41	1.45	1.47	1.48	1.00
TOTAL, ALL INDUSTRIES	3.29	3.43	3.57	3.74	3.88	3.97	3.84
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.20	0.21	0.22	0.22	0.22	0.22	2.08
11. NEW CONSTRUCTION	14.99	15.02	15.04	15.24	15.34	15.29	0.40
13. ORDNANCE & ACCESSORIES	0.03	0.03	0.03	0.03	0.03	0.03	0.85
24. PAPER & ALLIED PRODUCTS	0.48	0.50	0.50	0.50	0.50	0.50	0.72
27. CHEMICALS & PRODUCTS	0.67	0.69	0.70	0.71	0.72	0.72	1.52
31. PET REFINING & REL. PROD.	1.13	1.13	1.14	1.15	1.15	1.15	0.31
37. PRIMARY FERROUS METALS	1.65	1.69	1.73	1.73	1.72	1.70	0.59
38. NONFERROUS METALS	0.30	0.31	0.33	0.34	0.35	0.36	3.97
40. FAB. STRUCTURAL METAL PRODUCTS	2.21	2.20	2.24	2.30	2.34	2.36	1.28
42. OTHER FAB. METAL PRODUCTS	0.13	0.14	0.14	0.15	0.15	0.16	3.38
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	2.65
56. RADIO, TV. & COMMUNICATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	2.36
61. OTHER TRANSPORTATION EQ.	2.24	2.31	2.39	2.44	2.45	2.47	1.92
65. TRANSPORTATION & WAREHOUSING	1.14	1.15	1.14	1.15	1.13	1.10	-0.72

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
86. BOILERMAKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
68. UTILITIES	2.33	2.33	2.32	2.32	2.32	2.32	-0.07
72. PERSONAL SERVICES EXC. AUTO.	4.35	4.62	4.90	5.18	5.47	5.74	5.69
77. MISC. SERVICES	1.81	1.84	1.88	1.93	1.98	2.04	2.47
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.55	0.56	0.57	0.58	0.59	0.59	1.46
82. GOVERNMENT INDUSTRY	6.01	6.00	6.07	6.19	6.31	6.41	1.29
TOTAL, ALL INDUSTRIES	42.08	42.61	43.31	44.19	44.82	45.24	1.46

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
87. COREMAKERS, HAND, BENCH, FLOOR  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.02	0.02	0.02	0.02	0.02	0.02	6.44
37. PRIMARY FERROUS METALS	0.26	0.29	0.30	0.33	0.34	0.35	6.09
38. NONFERROUS METALS	0.12	0.14	0.15	0.16	0.17	0.18	8.69
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	8.98
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	10.15
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.65
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.38
49. GENERAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.02	0.02	0.03	7.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.27
56. RADIO, TV, & COMMUNICATION EQ.	0.02	0.02	0.02	0.03	0.03	0.03	8.35
60. AIRCRAFT & PARTS	0.03	0.04	0.04	0.05	0.05	0.05	8.63
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	2.67
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.01	0.01	0.01	5.37
82. GOVERNMENT INDUSTRY	0.00	0.00	0.00	0.00	0.00	0.00	--
TOTAL, ALL INDUSTRIES	0.57	0.64	0.69	0.74	0.79	0.81	7.24
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.03	0.03	0.03	0.03	0.03	0.03	0.42
37. PRIMARY FERROUS METALS	3.68	3.72	3.78	3.76	3.72	3.64	-0.18
38. NONFERROUS METALS	1.42	1.46	1.51	1.54	1.56	1.57	2.14
40. FAB. STRUCTURAL METAL PRODUCTS	0.24	0.24	0.25	0.26	0.27	0.28	3.17
42. OTHER FAB. METAL PRODUCTS	0.24	0.24	0.26	0.26	0.27	0.28	3.43
43. ENGINES & TURBINES	0.12	0.13	0.13	0.13	0.13	0.13	1.71
47. METALWORKING MACH. & EQ.	0.16	0.17	0.18	0.18	0.19	0.19	3.78
49. GENERAL INDUSTRY MACHINERY	0.41	0.42	0.44	0.45	0.46	0.47	2.60
55. ELECTRIC LIGHTING & WIRING EQ.	0.13	0.14	0.14	0.14	0.15	0.15	1.72
56. RADIO, TV, & COMMUNICATION EQ.	0.04	0.05	0.05	0.05	0.05	0.05	2.18
60. AIRCRAFT & PARTS	0.07	0.07	0.07	0.07	0.07	0.07	2.03
61. OTHER TRANSPORTATION EQ.	0.06	0.06	0.06	0.06	0.06	0.06	1.27
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.14	0.15	0.15	0.15	0.15	0.15	1.21
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	0.83
TOTAL, ALL INDUSTRIES	7.65	7.82	8.03	8.13	8.15	8.13	1.21

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
88. FORGING PRESS OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.02	0.03	0.03	0.03	0.03	0.03	8.81
37. PRIMARY FERROUS METALS	0.02	0.02	0.02	0.02	0.03	0.03	7.19
38. NONFERROUS METALS	0.03	0.03	0.03	0.04	0.04	0.04	9.68
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.04	0.05	0.05	0.05	0.06	8.26
41. SCREW MACHINE PROD.&STAMPINGS	0.14	0.15	0.16	0.18	0.19	0.20	7.69
42. OTHER FAB. METAL PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.04	10.02
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.12
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.36
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.02	0.02	0.02	9.31
56. RADIO,TV, & COMMUNICATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.00
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.02	0.02	0.02	0.03	0.03	17.14
60. AIRCRAFT & PARTS	0.52	0.58	0.64	0.71	0.78	0.78	8.59
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.05	2.66
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.02	5.25
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	-0.33
TOTAL, ALL INDUSTRIES	0.93	1.04	1.14	1.25	1.33	1.38	8.21
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.04	0.04	0.04	0.04	0.04	0.04	2.65
37. PRIMARY FERROUS METALS	0.27	0.27	0.28	0.28	0.28	0.28	0.86
38. NONFERROUS METALS	0.30	0.31	0.33	0.34	0.34	0.35	3.06
40. FAB. STRUCTURAL METAL PRODUCTS	0.85	0.86	0.89	0.92	0.95	0.97	2.49
41. SCREW MACHINE PRDD.&STAMPINGS	2.23	2.35	2.42	2.46	2.48	2.48	2.18
42. OTHER FAB. METAL PRODUCTS	0.49	0.51	0.54	0.55	0.57	0.58	3.30
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.12	0.13	0.13	0.13	0.14	3.62
47. METALWORKING MACH. & EQ.	0.12	0.12	0.13	0.14	0.14	0.14	3.76
53. ELECTRICAL MACHINERY	0.22	0.23	0.24	0.25	0.25	0.25	2.24
56. RADIO,TV, & COMMUNICATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	1.86
59. MOTOR VEHICLES & EQUIPMENT	0.76	0.79	0.82	0.83	0.84	0.85	2.23
60. AIRCRAFT & PARTS	1.03	1.07	1.10	1.14	1.14	1.14	1.99
61. OTHER TRANSPORTATION EQ.	0.17	0.17	0.17	0.18	0.18	0.18	1.26
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.14	0.14	0.15	0.15	0.15	0.15	2.32
82. GOVERNMENT INDUSTRY	0.00	0.00	0.00	0.00	0.00	0.00	--
TOTAL, ALL INDUSTRIES	7.75	8.04	8.32	8.52	8.62	8.69	2.32

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE

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BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
89. HEADER OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.23
41. SCREW MACHINE PROD.&STAMPINGS	0.26	0.30	0.32	0.35	0.37	0.38	7.77
TOTAL, ALL INDUSTRIES	0.28	0.32	0.34	0.37	0.39	0.41	7.79
TOTAL EMPLOYMENT							
40. FAB. STRUCTURAL METAL PRODUCTS	0.20	0.20	0.21	0.21	0.22	0.22	2.46
41. SCREW MACHINE PROD.&STAMPINGS	4.31	4.53	4.68	4.76	4.79	4.81	2.24
TOTAL, ALL INDUSTRIES	4.60	4.83	4.99	5.08	5.12	5.15	2.26

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
90. HEAT TREATERS, ANNEALERS, TEMPERERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.14	0.16	0.17	0.18	0.19	0.20	7.80
37. PRIMARY FERROUS METALS	0.22	0.24	0.28	0.28	0.30	0.32	7.58
38. NONFERROUS METALS	0.38	0.40	0.44	0.48	0.51	0.53	8.35
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.06	0.06	0.07	0.07	0.08	8.45
41. SCREW MACHINE PROD.&STAMPINGS	0.09	0.10	0.11	0.12	0.13	0.13	7.73
42. OTHER FAB. METAL PRODUCTS	0.05	0.05	0.06	0.06	0.07	0.07	10.07
43. ENGINES & TURBINES	0.02	0.02	0.02	0.02	0.02	0.02	7.73
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.12
47. METALWORKING MACH. & EQ.	0.07	0.08	0.09	0.09	0.10	0.11	9.36
49. GENERAL INDUSTRY MACHINERY	0.06	0.07	0.08	0.08	0.09	0.09	7.51
50. MISC. NONELECTRICAL MACH.	0.04	0.04	0.05	0.05	0.06	0.06	7.52
53. ELECTRICAL MACHINERY	0.02	0.03	0.03	0.03	0.04	0.04	9.14
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.28
56. RADIO, TV, & COMMUNICATION EQ.	0.10	0.11	0.12	0.13	0.14	0.14	7.89
57. ELECTRONIC COMPONENTS & ACCESS.	0.09	0.11	0.12	0.14	0.15	0.16	11.37
59. MOTOR VEHICLES & EQUIPMENT	0.05	0.06	0.06	0.08	0.09	0.10	17.14
60. AIRCRAFT & PARTS	0.61	0.69	0.76	0.84	0.90	0.92	8.59
61. OTHER TRANSPORTATION EQ.	0.06	0.07	0.07	0.07	0.07	0.07	3.20
62. INSTRUMENTS & SUPPLIES	0.05	0.06	0.06	0.07	0.07	0.07	8.18
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.01	0.01	0.01	5.48
82. GOVERNMENT INDUSTRY	0.15	0.15	0.15	0.15	0.16	0.16	0.88
TOTAL, ALL INDUSTRIES	2.27	2.54	2.77	3.02	3.22	3.34	8.07
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.23	0.23	0.24	0.24	0.25	0.25	1.70
37. PRIMARY FERROUS METALS	3.07	3.16	3.25	3.28	3.28	3.26	1.23
38. NONFERROUS METALS	4.21	4.33	4.46	4.55	4.58	4.61	1.82
40. FAB. STRUCTURAL METAL PRODUCTS	1.15	1.18	1.20	1.24	1.28	1.31	2.67
41. SCREW MACHINE PROD.&STAMPINGS	1.50	1.58	1.63	1.66	1.67	1.67	2.20
42. OTHER FAB. METAL PRODUCTS	0.98	1.01	1.06	1.10	1.13	1.15	3.35
43. ENGINES & TURBINES	0.19	0.20	0.21	0.21	0.21	0.21	1.79
45. CONSTR. & MINING MACHINERY	0.57	0.60	0.64	0.66	0.68	0.68	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.20	0.21	0.22	0.23	0.24	0.24	3.63
47. METALWORKING MACH. & EQ.	1.32	1.37	1.45	1.51	1.56	1.59	3.76
49. GENERAL INDUSTRY MACHINERY	1.42	1.46	1.52	1.56	1.59	1.62	2.62

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
90. HEAT TREATERS, ANNEALERS, TEMPERERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
50. MISC. NONELECTRICAL MACH.	0.35	0.36	0.38	0.39	0.39	0.39	2.22
53. ELECTRICAL MACHINERY	0.48	0.49	0.51	0.53	0.53	0.54	2.08
55. ELECTRIC LIGHTING & WIRING EQ.	0.13	0.13	0.14	0.14	0.14	0.14	1.73
56. RADIO, TV, & COMMUNICATION EQ.	0.23	0.23	0.24	0.24	0.24	0.25	1.75
57. ELECTRONIC COMPONENTS & ACCESS.	0.41	0.43	0.45	0.47	0.49	0.50	3.65
59. MOTOR VEHICLES & EQUIPMENT	2.42	2.53	2.61	2.65	2.68	2.70	2.23
60. AIRCRAFT & PARTS	1.22	1.27	1.31	1.35	1.35	1.35	2.00
61. OTHER TRANSPORTATION EQ.	0.22	0.22	0.23	0.24	0.24	0.24	1.79
62. INSTRUMENTS & SUPPLIES	0.42	0.43	0.45	0.47	0.48	0.49	2.72
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.09	0.09	0.10	0.10	0.10	0.10	2.25
62. GOVERNMENT INDUSTRY	0.36	0.36	0.36	0.37	0.38	0.38	1.12
TOTAL, ALL INDUSTRIES	22.15	22.85	23.68	24.24	24.55	24.75	2.25

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
91. LAYOUT MARKERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	62	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
<b>DEFENSE INDUCED EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.15	0.17	0.19	0.20	0.22	0.23	8.76
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.05	0.06	0.06	7.78
38. NONFERROUS METALS	0.01	0.01	0.01	0.01	0.02	0.02	9.24
40. FAB. STRUCTURAL METAL PRODUCTS	0.32	0.36	0.38	0.40	0.42	0.44	6.64
41. SCREW MACHINE PROD.&STAMPINGS	0.02	0.02	0.03	0.03	0.03	0.03	7.69
42. OTHER FAB. METAL PRODUCTS	0.02	0.03	0.03	0.03	0.04	0.04	9.89
43. ENGINES & TURBINES	0.01	0.01	0.01	0.02	0.02	0.02	7.71
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.12
47. METALWORKING MACH. & EQ.	0.02	0.03	0.03	0.03	0.03	0.03	9.35
49. GENERAL INDUSTRY MACHINERY	0.03	0.03	0.03	0.03	0.04	0.04	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.02	0.02	0.02	7.54
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.02	13.36
53. ELECTRICAL MACHINERY	0.02	0.02	0.02	0.02	0.02	0.02	8.95
56. RADIO, TV, & COMMUNICATION EQ.	0.09	0.10	0.11	0.12	0.13	0.13	6.30
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.06	0.06	11.34
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.01	0.01	17.13
60. AIRCRAFT & PARTS	0.67	0.75	0.83	0.92	0.98	1.01	8.59
61. OTHER TRANSPORTATION EQ.	0.23	0.25	0.25	0.26	0.27	0.27	3.31
62. INSTRUMENTS & SUPPLIES	0.01	0.02	0.02	0.02	0.02	0.02	8.02
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.05	0.06	0.06	0.06	0.07	0.07	5.03
TOTAL, ALL INDUSTRIES	1.83	2.05	2.21	2.40	2.55	2.64	7.62
<b>TOTAL EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.24	0.25	0.26	0.27	0.27	0.28	2.61
37. PRIMARY FERROUS METALS	0.58	0.60	0.62	0.63	0.63	0.63	1.41
38. NONFERROUS METALS	0.12	0.13	0.13	0.14	0.14	0.14	2.65
40. FAB. STRUCTURAL METAL PRODUCTS	7.15	7.10	7.21	7.38	7.47	7.50	0.98
41. SCREW MACHINE PROD.&STAMPINGS	0.36	0.37	0.39	0.39	0.39	0.40	2.16
42. OTHER FAB. METAL PRODUCTS	0.51	0.52	0.55	0.57	0.58	0.59	3.18
43. ENGINES & TURBINES	0.14	0.15	0.15	0.15	0.16	0.16	1.77
45. CONSTR. & MINING MACHINERY	1.54	1.63	1.71	1.77	1.82	1.84	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.55	0.57	0.60	0.63	0.64	0.66	3.62
47. METALWORKING MACH. & EQ.	0.43	0.45	0.47	0.49	0.51	0.52	3.75
49. GENERAL INDUSTRY MACHINERY	0.59	0.61	0.64	0.65	0.66	0.67	2.62
50. MISC. NONELECTRICAL MACH.	0.14	0.15	0.15	0.16	0.16	0.16	2.23

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
 "OCCUPATION BY INDUSTRY MODEL  
 ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
 91. LAYOUT MARKERS, METAL  
 (THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH
							82 TO 87
52. SERVICE INDUSTRY MACHINES	0.47	0.48	0.51	0.52	0.52	0.52	2.09
53. ELECTRICAL MACHINERY	0.31	0.32	0.33	0.34	0.34	0.34	1.91
56. RADIO, TV, & COMMUNICATION EQ.	0.21	0.22	0.22	0.23	0.23	0.24	2.14
57. ELECTRONIC COMPONENTS & ACCESS.	0.18	0.17	0.18	0.19	0.19	0.20	3.62
59. MOTOR VEHICLES & EQUIPMENT	0.33	0.34	0.36	0.36	0.36	0.37	2.22
60. AIRCRAFT & PARTS	1.34	1.39	1.43	1.47	1.48	1.48	2.00
61. OTHER TRANSPORTATION EQ.	0.80	0.83	0.86	0.87	0.88	0.88	1.90
62. INSTRUMENTS & SUPPLIES	0.12	0.12	0.13	0.13	0.14	0.14	2.57
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.52	0.53	0.55	0.56	0.57	0.57	1.84
TOTAL, ALL INDUSTRIES	17.85	18.17	18.73	19.23	19.50	19.65	1.94

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
 BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
92. MACH. TOOL SETTERS, METALWORKING  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.31	0.35	0.38	0.40	0.42	0.43	6.82
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.81
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.51
37. PRIMARY FERROUS METALS	0.03	0.03	0.03	0.04	0.04	0.04	8.19
38. NONFERROUS METALS	0.10	0.11	0.13	0.14	0.15	0.16	9.30
40. FAB. STRUCTURAL METAL PRODUCTS	0.11	0.12	0.13	0.14	0.15	0.16	8.40
41. SCREW MACHINE PROD. & STAMPINGS	0.20	0.22	0.24	0.26	0.28	0.29	7.75
42. OTHER FAB. METAL PRODUCTS	0.09	0.10	0.11	0.12	0.13	0.14	10.06
43. ENGINES & TURBINES	0.03	0.03	0.03	0.03	0.04	0.04	7.69
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.02	0.02	0.02	0.02	9.13
47. METALWORKING MACH. & EQ.	0.14	0.16	0.18	0.20	0.21	0.22	9.36
48. SPECIALTY INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.05
49. GENERAL INDUSTRY MACHINERY	0.18	0.20	0.22	0.23	0.25	0.26	7.51
50. MISC. ELECTRICAL MACH.	0.37	0.40	0.44	0.49	0.52	0.53	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.04	0.05	0.05	0.05	0.05	7.32
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.02	0.03	0.03	0.03	13.36
53. ELECTRICAL MACHINERY	0.09	0.10	0.11	0.12	0.13	0.14	9.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.06	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.86	0.99	1.09	1.18	1.24	1.27	8.04
57. ELECTRONIC COMPONENTS & ACCESS.	0.12	0.15	0.17	0.19	0.20	0.21	11.38
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.52
59. MOTOR VEHICLES & EQUIPMENT	0.21	0.26	0.29	0.35	0.41	0.47	17.14
60. AIRCRAFT & PARTS	1.93	2.18	2.40	2.65	2.84	2.91	8.60
61. OTHER TRANSPORTATION EQ.	0.05	0.06	0.06	0.06	0.06	0.06	3.55
62. INSTRUMENTS & SUPPLIES	0.23	0.26	0.28	0.31	0.33	0.34	8.16
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.03	0.03	0.03	0.03	0.04	8.55
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	8.72
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.03	0.03	0.04	0.04	0.04	0.04	3.69
82. GOVERNMENT INDUSTRY	2.69	2.63	2.64	2.68	2.67	2.64	-0.33
TOTAL, ALL INDUSTRIES	7.95	8.59	9.19	9.86	10.36	10.63	5.99
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.51	0.52	0.52	0.53	0.53	0.53	0.78
23. OTHER FURNITURE & FIXTURES	0.56	0.56	0.56	0.60	0.61	0.63	2.39
36. STONE & CLAY PRODUCTS	0.22	0.22	0.23	0.23	0.24	0.23	1.26

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
92. MACH. TOOL SETTERS, METALWORKING  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
37. PRIMARY FERROUS METALS	0.38	0.39	0.40	0.41	0.41	0.41	1.80
38. NONFERROUS METALS	1.18	1.22	1.27	1.30	1.33	1.34	2.71
40. FAB. STRUCTURAL METAL PRODUCTS	2.42	2.44	2.52	2.62	2.70	2.75	2.63
41. SCREW MACHINE PROD.&STAMPINGS	3.28	3.44	3.56	3.62	3.64	3.66	2.22
42. OTHER FAB. METAL PRODUCTS	1.85	1.92	2.01	2.08	2.13	2.18	3.34
43. ENGINES & TURBINES	0.31	0.32	0.33	0.34	0.34	0.34	1.76
45. CONSTR. & MINING MACHINERY	0.61	0.65	0.68	0.71	0.73	0.73	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.22	0.23	0.24	0.25	0.26	0.26	3.63
47. METALWORKING MACH. & EQ.	2.75	2.86	3.03	3.15	3.24	3.31	3.76
48. SPECIAL INDUSTRY MACHINERY	0.80	0.82	0.86	0.89	0.92	0.94	3.21
49. GENERAL INDUSTRY MACHINERY	4.08	4.18	4.38	4.49	4.57	4.64	2.62
50. MISC. NONELECTRICAL MACH.	3.23	3.32	3.46	3.53	3.57	3.61	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	0.97	1.01	1.05	1.07	1.08	1.11	2.73
52. SERVICE INDUSTRY MACHINES	0.96	1.00	1.04	1.06	1.06	1.06	2.10
53. ELECTRICAL MACHINERY	1.76	1.79	1.88	1.92	1.94	1.96	2.11
55. ELECTRIC LIGHTING & WIRING EQ.	0.88	0.89	0.91	0.93	0.95	0.96	1.70
56. RADIO, TV, & COMMUNICATION EQ.	2.04	2.08	2.15	2.18	2.20	2.24	1.89
57. ELECTRONIC COMPONENTS & ACCESS.	0.57	0.59	0.62	0.65	0.66	0.68	3.66
58. MISC. ELECTRICAL MACH. & EQ.	0.28	0.29	0.30	0.30	0.31	0.31	2.07
59. MOTOR VEHICLES & EQUIPMENT	11.10	11.80	12.00	12.19	12.32	12.39	2.23
60. AIRCRAFT & PARTS	3.86	4.02	4.13	4.26	4.27	4.26	2.00
61. OTHER TRANSPORTATION EQ.	0.18	0.19	0.20	0.20	0.20	0.20	2.14
62. INSTRUMENTS & SUPPLIES	1.99	2.02	2.10	2.18	2.24	2.27	2.71
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.56	0.57	0.59	0.62	0.64	0.66	3.19
64. MISC. MANUFACTURING	0.93	0.95	0.99	1.02	1.05	1.06	2.68
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.20	0.21	0.22	0.22	0.23	0.23	2.45
82. GOVERNMENT INDUSTRY	0.19	0.19	0.19	0.19	0.19	0.19	-0.50
TOTAL, ALL INDUSTRIES	50.29	51.95	53.94	55.32	56.13	56.75	2.45

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
93. MACHINISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.01	0.01	0.02	0.02	0.02	0.02	7.71
6. NONFERROUS METAL MINING	0.07	0.09	0.10	0.11	0.12	0.13	11.60
7. COAL MINING	0.02	0.03	0.03	0.03	0.03	0.03	9.08
8. CRUDE PETROLEUM & N. GAS	0.04	0.05	0.05	0.05	0.06	0.06	5.24
9. STONE&CLAY MINING & QUARRYING	0.01	0.01	0.01	0.01	0.01	0.01	9.55
11. NEW CONSTRUCTION	0.03	0.04	0.04	0.04	0.05	0.05	9.00
13. ORDNANCE & ACCESSORIES	1.24	1.39	1.51	1.63	1.71	1.77	7.35
14. FOOD & KINDRED PRODUCTS	0.04	0.05	0.05	0.05	0.05	0.05	5.05
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.03	0.03	0.04	0.04	4.97
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	7.12
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.02	4.69
20. LUMBER & WOOD PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.05	9.62
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.19
24. PAPER & ALLIED PRODUCTS	0.08	0.08	0.09	0.10	0.10	0.11	6.73
25. PAPERBOARD CONTAINERS & BOXES	0.02	0.02	0.03	0.03	0.03	0.03	8.78
26. PRINTING & PUBLISHING	0.04	0.04	0.05	0.05	0.05	0.05	5.97
27. CHEMICALS & PRODUCTS	0.13	0.15	0.16	0.17	0.18	0.19	7.90
28. PLASTICS & SYNTHETIC MATLS.	0.04	0.05	0.05	0.06	0.06	0.06	8.71
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.01	4.14
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	8.21
31. PET REFINING & REL. PROD.	0.12	0.13	0.14	0.15	0.15	0.16	5.23
32. RUBBER & MISC. PLASTICS PROD.	0.24	0.27	0.30	0.34	0.37	0.39	10.42
35. GLASS & GLASS PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	9.76
36. STONE & CLAY PRODUCTS	0.07	0.08	0.08	0.09	0.09	0.10	7.40
37. PRIMARY FERROUS METALS	0.52	0.58	0.63	0.69	0.73	0.77	8.05
38. NONFERROUS METALS	0.43	0.49	0.55	0.61	0.66	0.69	9.98
39. METAL CONTAINERS	0.03	0.04	0.04	0.04	0.04	0.05	7.00
40. FAB. STRUCTURAL METAL PRODUCTS	0.32	0.36	0.39	0.42	0.45	0.47	7.89
41. SCREW MACHINE PROD. & STAMPINGS	0.36	0.40	0.43	0.47	0.50	0.52	7.88
42. OTHER FAB. METAL PRODUCTS	0.25	0.29	0.31	0.34	0.37	0.39	9.12
43. ENGINES & TURBINES	0.13	0.15	0.16	0.17	0.18	0.19	8.17
45. CONSTR. & MINING MACHINERY	0.07	0.08	0.08	0.09	0.09	0.10	7.24
48. MATERIALS HANDLING MACH. & EQ.	0.12	0.14	0.15	0.16	0.17	0.18	9.12
47. METALWORKING MACH. & EQ.	0.88	1.02	1.13	1.28	1.36	1.43	10.08
48. SPECIAL INDUSTRY MACHINERY	0.04	0.05	0.05	0.06	0.07	0.07	12.06
49. GENERAL INDUSTRY MACHINERY	0.23	0.26	0.28	0.30	0.32	0.33	7.51
50. MISC. NONELECTRICAL MACH.	1.65	1.81	2.00	2.21	2.37	2.46	8.30

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
93. MACHINISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
51. OFFICE COMPUTING & ACCT. MACH.	0.07	0.08	0.08	0.09	0.09	0.10	7.32
52. SERVICE INDUSTRY MACHINES	0.01	0.02	0.02	0.02	0.02	0.03	13.37
53. ELECTRICAL MACHINERY	0.14	0.16	0.18	0.20	0.21	0.22	9.19
55. ELECTRIC LIGHTING & WIRING EQ.	0.08	0.09	0.10	0.11	0.12	0.12	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.65	1.83	1.94	2.03	2.05	2.02	4.07
57. ELECTRONIC COMPONENTS & ACCESS.	0.72	0.86	0.97	1.08	1.18	1.23	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.04	0.04	0.05	0.05	0.05	0.06	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.05	0.06	0.07	0.09	0.10	0.12	17.14
60. AIRCRAFT & PARTS	2.95	3.34	3.68	4.06	4.34	4.46	8.59
61. OTHER TRANSPORTATION EQ.	1.78	1.87	1.94	1.98	2.04	2.10	3.38
62. INSTRUMENTS & SUPPLIES	0.71	0.80	0.87	0.95	1.01	1.05	8.20
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.10	0.11	0.12	0.13	0.14	0.15	8.62
64. MISC. MANUFACTURING	0.02	0.02	0.02	0.02	0.03	0.03	6.53
65. TRANSPORTATION & WAREHOUSING	0.47	0.49	0.51	0.53	0.54	0.54	2.59
68. UTILITIES	0.07	0.08	0.08	0.09	0.09	0.09	6.12
69. WHOLESALE & RETAIL TRADE	0.07	0.08	0.08	0.09	0.10	0.11	9.70
72. PERSONAL SERVICES EXC. AUTO.	0.28	0.33	0.37	0.42	0.47	0.50	12.30
73. BUSINESS SERVICES	0.15	0.17	0.19	0.21	0.22	0.23	7.86
75. AUTOMOBILE REPAIR & SERVICE	0.08	0.08	0.09	0.10	0.10	0.10	6.79
77. MISC. SERVICES	0.03	0.03	0.04	0.04	0.04	0.04	3.28
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.91	0.95	1.00	1.05	1.09	1.10	3.79
82. GOVERNMENT INDUSTRY	10.82	10.61	10.82	11.12	11.30	11.38	1.00
TOTAL, ALL INDUSTRIES	28.62	30.42	32.27	34.37	35.95	36.84	5.18
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.24	0.26	0.27	0.27	0.27	0.26	1.56
6. NONFERROUS METAL MINING	1.25	1.33	1.39	1.43	1.43	1.45	2.98
7. COAL MINING	0.79	0.83	0.87	0.89	0.92	0.94	3.38
8. CRUDE PETROLEUM & N. GAS	0.59	0.60	0.60	0.59	0.59	0.60	0.41
9. STONE & CLAY MINING & QUARRYING	0.27	0.28	0.29	0.30	0.30	0.31	2.18
11. NEW CONSTRUCTION	0.85	0.87	0.89	0.92	0.95	0.96	2.56
13. ORDNANCE & ACCESSORIES	2.05	2.09	2.11	2.15	2.17	2.18	1.28
14. FOOD & KINDRED PRODUCTS	6.40	6.48	6.52	6.50	6.43	6.38	-0.06
16. FABRIC, YARN & THREAD MILLS	2.28	2.34	2.40	2.44	2.46	2.46	1.58
17. MISC. TEXTILE GOODS	0.54	0.56	0.58	0.60	0.61	0.62	2.73
19. MISC. FABRICATED TEXTILE PROD.	0.41	0.42	0.43	0.44	0.45	0.45	1.87
20. LUMBER & WOOD PRODUCTS	1.39	1.52	1.59	1.66	1.68	1.68	3.77
23. OTHER FURNITURE & FIXTURES	0.72	0.72	0.74	0.76	0.77	0.78	1.78

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
93. MACHINISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
24. PAPER & ALLIED PRODUCTS	4.11	4.23	4.28	4.30	4.30	4.29	0.89
25. PAPERBOARD CONTAINERS & BOXES	0.95	0.97	0.99	1.01	1.02	1.03	1.72
26. PRINTING & PUBLISHING	2.61	2.61	2.63	2.64	2.65	2.65	0.36
27. CHEMICALS & PRODUCTS	2.76	2.82	2.87	2.90	2.93	2.95	1.36
28. PLASTICS & SYNTHETIC MATLS.	1.69	1.75	1.81	1.86	1.88	1.89	2.31
29. DRUGS, CLEANING & TOILET PREP.	2.38	2.39	2.43	2.46	2.46	2.47	0.74
30. PAINTS & ALLIED PRODUCTS	0.20	0.21	0.22	0.22	0.23	0.23	2.98
31. PET REFINING & REL. PROD.	2.28	2.28	2.29	2.32	2.32	2.32	0.30
32. RUBBER & MISC. PLASTICS PROD.	8.73	9.04	9.43	9.74	10.00	10.11	2.99
35. GLASS & GLASS PRODUCTS	0.97	0.99	1.01	1.02	1.02	1.02	1.02
36. STONE & CLAY PRODUCTS	2.10	2.13	2.14	2.18	2.17	2.13	0.22
37. PRIMARY FERROUS METALS	7.30	7.54	7.80	7.91	7.95	7.93	1.67
38. NONFERROUS METALS	5.07	5.29	5.53	5.73	5.86	5.97	3.35
39. METAL CONTAINERS	2.27	2.25	2.26	2.31	2.33	2.35	0.72
40. FAB. STRUCTURAL METAL PRODUCTS	7.22	7.26	7.45	7.72	7.90	8.03	2.14
41. SCREW MACHINE PROD. & STAMPINGS	5.79	6.10	6.31	6.42	6.47	6.50	2.34
42. OTHER FAB. METAL PRODUCTS	5.46	5.60	5.81	5.96	6.06	6.17	2.46
43. ENGINES & TURBINES	1.55	1.60	1.67	1.70	1.71	1.73	2.20
45. CONSTR. & MINING MACHINERY	5.81	6.14	6.46	6.69	6.87	6.95	3.64
46. MATERIALS HANDLING MACH. & EQ.	2.08	2.14	2.27	2.37	2.43	2.48	3.62
47. METALWORKING MACH. & EQ.	17.19	18.01	19.21	20.13	20.84	21.37	4.45
48. SPECIAL INDUSTRY MACHINERY	5.52	5.64	5.92	6.19	6.34	6.47	3.22
49. GENERAL INDUSTRY MACHINERY	5.23	5.36	5.61	5.76	5.85	5.95	2.62
50. MISC. NONELECTRICAL MACH.	14.42	14.91	15.66	16.12	16.38	16.68	2.95
51. OFFICE, COMPUTING & ACCT. MACH.	1.81	1.88	1.96	1.99	2.02	2.07	2.72
52. SERVICE INDUSTRY MACHINES	0.81	0.84	0.88	0.89	0.90	0.90	2.10
53. ELECTRICAL MACHINERY	2.86	2.91	3.05	3.12	3.16	3.18	2.13
55. ELECTRIC LIGHTING & WIRING EQ.	1.69	1.71	1.75	1.79	1.82	1.84	1.70
56. RADIO, TV, & COMMUNICATION EQ.	3.92	3.86	3.84	3.76	3.65	3.57	-1.85
57. ELECTRONIC COMPONENTS & ACCESS.	3.29	3.43	3.60	3.75	3.85	3.93	3.65
58. MISC. ELECTRICAL MACH. & EQ.	1.35	1.39	1.45	1.47	1.48	1.50	2.12
59. MOTOR VEHICLES & EQUIPMENT	2.74	2.87	2.96	3.01	3.04	3.06	2.23
60. AIRCRAFT & PARTS	5.91	6.15	6.31	6.51	6.53	6.52	2.00
61. OTHER TRANSPORTATION EQ.	6.14	6.32	6.55	6.69	6.71	6.77	1.97
62. INSTRUMENTS & SUPPLIES	6.08	6.18	6.43	6.67	6.85	6.96	2.74
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.31	2.35	2.45	2.56	2.65	2.71	3.25
64. MISC. MANUFACTURING	1.71	1.74	1.81	1.87	1.90	1.93	2.48
65. TRANSPORTATION & WAREHOUSING	11.15	11.21	11.25	11.32	11.19	10.99	-0.28
68. UTILITIES	3.23	3.24	3.25	3.25	3.26	3.26	0.16

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
93. MACHINISTS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	10.90	11.26	11.62	11.93	12.17	12.43	2.65
72. PERSONAL SERVICES EXC. AUTO.	15.40	16.29	17.26	18.23	19.21	20.15	5.53
73. BUSINESS SERVICES	3.19	3.27	3.36	3.46	3.55	3.61	2.50
75. AUTOMOBILE REPAIR & SERVICE	5.18	5.26	5.28	5.28	5.29	5.32	0.51
77. MISC. SERVICES	5.24	5.27	5.31	5.39	5.49	5.60	1.34
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	7.44	7.63	7.87	8.07	8.21	8.31	2.24
82. GOVERNMENT INDUSTRY	27.95	27.86	28.08	28.53	28.98	29.37	1.00
TOTAL, ALL INDUSTRIES	267.00	273.79	282.49	289.67	294.46	298.26	2.24

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
94. MOLDERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
<b>DEFENSE INDUCED EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.03	0.03	0.03	0.03	0.03	0.04	6.84
35. GLASS & GLASS PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	7.64
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.11
37. PRIMARY FERROUS METALS	0.96	1.05	1.12	1.20	1.26	1.29	6.10
38. NONFERROUS METALS	0.51	0.58	0.63	0.69	0.74	0.77	8.70
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.06	0.06	0.07	0.08	0.08	8.98
41. SCREW MACHINE PROD.&STAMPINGS	0.02	0.02	0.02	0.02	0.03	0.03	7.66
42. OTHER FAB. METAL PRODUCTS	0.03	0.04	0.04	0.05	0.05	0.06	10.12
43. ENGINES & TURBINES	0.02	0.03	0.03	0.03	0.03	0.03	7.68
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.02	9.13
47. METALWORKING MACH. & EQ.	0.07	0.09	0.09	0.10	0.11	0.12	9.36
49. GENERAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	7.52
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.50
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.04
55. ELECTRIC LIGHTING & WIRING EQ.	0.05	0.06	0.06	0.07	0.08	0.08	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.30
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.09	0.10	0.12	0.13	0.13	11.35
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.02	0.02	17.17
60. AIRCRAFT & PARTS	0.11	0.13	0.14	0.15	0.16	0.17	8.64
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.06	3.07
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.05	0.05	0.05	0.05	5.58
82. GOVERNMENT INDUSTRY	0.04	0.04	0.04	0.04	0.04	0.04	-0.33
TOTAL, ALL INDUSTRIES	2.29	2.55	2.75	2.98	3.16	3.27	7.40
<b>TOTAL EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.04	0.04	0.04	0.04	0.04	0.04	0.80
35. GLASS & GLASS PRODUCTS	2.67	2.68	2.68	2.66	2.61	2.55	-0.93
36. STONE & CLAY PRODUCTS	0.17	0.18	0.18	0.18	0.19	0.18	0.89
37. PRIMARY FERROUS METALS	13.48	13.65	13.85	13.79	13.63	13.36	-0.17
38. NONFERROUS METALS	6.01	6.20	6.41	6.56	6.63	6.68	2.15
40. FAB. STRUCTURAL METAL PRODUCTS	1.18	1.20	1.24	1.30	1.34	1.38	3.17
41. SCREW MACHINE PROD.&STAMPINGS	0.29	0.31	0.32	0.32	0.33	0.33	2.13
42. OTHER FAB. METAL PRODUCTS	0.76	0.78	0.82	0.85	0.87	0.89	3.40
43. ENGINES & TURBINES	0.29	0.30	0.31	0.31	0.32	0.32	1.75
45. CONSTR. & MINING MACHINERY	0.49	0.51	0.54	0.56	0.58	0.58	3.65

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
94. MOLDERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	AVG. ANN % GROWTH						
	82	83	84	85	86	87	82 TO 87
46. MATERIALS HANDLING MACH. & EQ.	0.17	0.18	0.19	0.20	0.20	0.21	3.63
47. METALWORKING MACH. & EQ.	1.44	1.50	1.59	1.65	1.70	1.73	3.76
49. GENERAL INDUSTRY MACHINERY	0.74	0.76	0.80	0.82	0.83	0.85	2.63
50. MISC. NONELECTRICAL MACH.	0.19	0.19	0.20	0.21	0.21	0.21	2.19
53. ELECTRICAL MACHINERY	0.15	0.15	0.16	0.16	0.17	0.17	1.99
55. ELECTRIC LIGHTING & WIRING EQ.	1.11	1.12	1.15	1.17	1.19	1.21	1.70
56. RADIO, TV, & COMMUNICATION EQ.	0.11	0.11	0.12	0.12	0.12	0.12	2.14
57. ELECTRONIC COMPONENTS & ACCESS.	0.35	0.37	0.39	0.40	0.41	0.42	3.64
59. MOTOR VEHICLES & EQUIPMENT	0.47	0.49	0.51	0.52	0.52	0.52	2.25
60. AIRCRAFT & PARTS	0.22	0.23	0.24	0.25	0.25	0.25	2.04
61. OTHER TRANSPORTATION EQ.	0.17	0.17	0.18	0.18	0.18	0.18	1.66
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.55	0.56	0.57	0.58	0.58	0.58	1.13
82. GOVERNMENT INDUSTRY	0.17	0.17	0.17	0.17	0.17	0.17	0.37
TOTAL, ALL INDUSTRIES	32.75	33.41	34.27	34.68	34.75	34.65	1.13

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
95. MOLDERS, BENCH&FLOOR  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
<b>DEFENSE INDUCED EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.02	0.03	0.03	0.03	0.03	0.03	6.61
37. PRIMARY FERROUS METALS	0.31	0.34	0.37	0.39	0.41	0.42	6.11
38. NONFERROUS METALS	0.20	0.23	0.25	0.27	0.29	0.30	8.68
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.03	0.03	0.04	0.04	8.67
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	10.10
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.68
47. METALWORKING MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.35
49. GENERAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.02	0.02	0.02	7.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.03	0.03	0.03	0.03	0.03	8.25
58. RADIO, TV, & COMMUNICATION EQ.	0.01	0.02	0.02	0.02	0.02	0.02	8.39
60. AIRCRAFT & PARTS	0.07	0.08	0.08	0.09	0.10	0.10	8.61
81. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	3.54
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.02	5.63
TOTAL, ALL INDUSTRIES	0.80	0.89	0.96	1.04	1.10	1.14	7.47
<b>TOTAL EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.04	0.04	0.04	0.04	0.04	0.04	0.58
37. PRIMARY FERROUS METALS	4.41	4.47	4.53	4.51	4.46	4.37	-0.15
38. NONFERROUS METALS	2.36	2.43	2.51	2.57	2.60	2.62	2.13
40. FAB. STRUCTURAL METAL PRODUCTS	0.58	0.59	0.61	0.64	0.66	0.67	2.88
42. OTHER FAB. METAL PRODUCTS	0.23	0.24	0.25	0.28	0.28	0.27	3.38
43. ENGINES & TURBINES	0.11	0.12	0.12	0.12	0.12	0.12	1.74
47. METALWORKING MACH. & EQ.	0.53	0.55	0.58	0.60	0.62	0.63	3.75
49. GENERAL INDUSTRY MACHINERY	0.44	0.45	0.47	0.48	0.49	0.50	2.62
50. MISC. NONELECTRICAL MACH.	0.13	0.13	0.14	0.14	0.14	0.15	2.20
55. ELECTRIC LIGHTING & WIRING EQ.	0.48	0.49	0.50	0.51	0.52	0.53	1.70
58. RADIO, TV, & COMMUNICATION EQ.	0.03	0.03	0.04	0.04	0.04	0.04	2.22
60. AIRCRAFT & PARTS	0.14	0.14	0.15	0.15	0.15	0.15	2.02
81. OTHER TRANSPORTATION EQ.	0.04	0.04	0.05	0.05	0.05	0.05	2.12
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.21	0.22	0.22	0.23	0.23	0.23	1.39
TOTAL, ALL INDUSTRIES	10.68	10.91	11.22	11.38	11.44	11.44	1.39

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
96. MOLOERS, MACHINE  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCEO EMPLOYMENT							
37. PRIMARY FERROUS METALS	0.49	0.53	0.57	0.61	0.64	0.65	6.08
38. NONFERROUS METALS	0.24	0.27	0.30	0.32	0.35	0.36	8.72
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	9.27
41. SCREW MACHINE PROD.&STAMPINGS	0.02	0.02	0.02	0.02	0.02	0.02	7.67
42. OTHER FAB. METAL PRODUCTS	0.02	0.03	0.03	0.03	0.04	0.04	10.13
43. ENGINES & TURBINES	0.01	0.02	0.02	0.02	0.02	0.02	7.68
47. METALWORKING MACH. & EQ.	0.05	0.05	0.06	0.07	0.07	0.07	9.36
49. GENERAL INDUSTRY MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	7.54
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.46
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.04	0.04	0.04	0.04	8.26
56. RADIO, TV, & COMMUNICATION EQ.	0.03	0.04	0.04	0.05	0.05	0.05	8.26
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.09	0.10	0.12	0.13	0.13	11.35
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.02	0.02	17.16
60. AIRCRAFT & PARTS	0.04	0.05	0.05	0.06	0.06	0.07	8.67
61. OTHER TRANSPORTATION EQ.	0.04	0.04	0.04	0.04	0.04	0.04	2.91
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.03	0.03	0.03	0.03	0.03	5.84
TOTAL, ALL INDUSTRIES	1.15	1.29	1.39	1.51	1.60	1.66	7.68
TOTAL EMPLOYMENT							
37. PRIMARY FERROUS METALS	6.83	6.92	7.02	6.99	6.91	6.77	-0.18
38. NONFERROUS METALS	2.81	2.89	3.00	3.07	3.10	3.13	2.17
40. FAB. STRUCTURAL METAL PRODUCTS	0.59	0.61	0.63	0.66	0.69	0.70	3.45
41. SCREW MACHINE PROD.&STAMPINGS	0.25	0.26	0.27	0.27	0.27	0.27	2.14
42. OTHER FAB. METAL PRODUCTS	0.53	0.55	0.57	0.59	0.61	0.62	3.41
43. ENGINES & TURBINES	0.18	0.18	0.19	0.19	0.19	0.19	1.75
47. METALWORKING MACH. & EQ.	0.91	0.95	1.01	1.05	1.08	1.10	3.76
49. GENERAL INDUSTRY MACHINERY	0.31	0.31	0.33	0.34	0.34	0.35	2.64
50. MISC. NONELECTRICAL MACH.	0.06	0.06	0.06	0.06	0.06	0.06	2.16
55. ELECTRIC LIGHTING & WIRING EQ.	0.62	0.63	0.65	0.66	0.67	0.68	1.71
56. RADIO, TV, & COMMUNICATION EQ.	0.08	0.08	0.08	0.08	0.08	0.09	2.10
57. ELECTRONIC COMPONENTS & ACCESS.	0.35	0.37	0.39	0.40	0.41	0.42	3.64
59. MOTOR VEHICLES & EQUIPMENT	0.43	0.45	0.47	0.48	0.48	0.48	2.25
60. AIRCRAFT & PARTS	0.09	0.09	0.09	0.10	0.10	0.10	2.07
61. OTHER TRANSPORTATION EQ.	0.12	0.13	0.13	0.13	0.13	0.13	1.50
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.32	0.32	0.33	0.34	0.34	0.34	1.43
TOTAL, ALL INDUSTRIES	15.80	16.17	16.65	16.89	16.97	16.96	1.43

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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
97. MOLDERS, METAL NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
35. GLASS & GLASS PRODUCTS	0.08	0.07	0.07	0.08	0.08	0.09	7.64
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.11
37. PRIMARY FERROUS METALS	0.16	0.17	0.19	0.20	0.21	0.21	6.10
38. NONFERROUS METALS	0.07	0.08	0.09	0.10	0.10	0.11	8.69
82. GOVERNMENT INDUSTRY	0.04	0.04	0.04	0.04	0.04	0.04	-0.33
TOTAL, ALL INDUSTRIES	0.34	0.37	0.40	0.43	0.45	0.46	6.28
TOTAL EMPLOYMENT							
35. GLASS & GLASS PRODUCTS	2.67	2.68	2.68	2.66	2.61	2.55	-0.93
36. STONE & CLAY PRODUCTS	0.17	0.18	0.18	0.18	0.19	0.18	0.89
37. PRIMARY FERROUS METALS	2.23	2.26	2.30	2.29	2.26	2.22	-0.16
38. NONFERROUS METALS	0.85	0.87	0.90	0.92	0.93	0.94	2.13
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	-0.50
TOTAL, ALL INDUSTRIES	6.23	6.29	6.37	6.37	6.30	6.21	-0.06

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
98. PATTERNAKERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.03	0.03	0.03	0.03	0.04	0.04	7.93
37. PRIMARY FERROUS METALS	0.05	0.06	0.06	0.07	0.07	0.07	6.12
38. NONFERROUS METALS	0.02	0.03	0.03	0.03	0.04	0.04	8.73
40. FAB. STRUCTURAL METAL PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	8.26
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	10.12
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.34
49. GENERAL INDUSTRY MACHINERY	0.10	0.11	0.12	0.13	0.14	0.14	7.51
56. RADIO, TV, & COMMUNICATION EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.03
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.06	0.06	11.34
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.02	0.02	17.14
60. AIRCRAFT & PARTS	0.41	0.47	0.52	0.57	0.61	0.63	8.59
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.02	0.02	0.02	3.12
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.06	0.06	0.07	0.07	0.07	0.07	4.57
82. GOVERNMENT INDUSTRY	0.11	0.10	0.11	0.11	0.11	0.11	0.82
TOTAL, ALL INDUSTRIES	0.93	1.03	1.12	1.22	1.29	1.33	7.41
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.04	0.04	0.04	0.05	0.05	0.05	1.82
37. PRIMARY FERROUS METALS	0.74	0.75	0.76	0.76	0.75	0.74	-0.15
38. NONFERROUS METALS	0.28	0.29	0.30	0.31	0.31	0.32	2.17
40. FAB. STRUCTURAL METAL PRODUCTS	0.41	0.42	0.43	0.45	0.46	0.47	2.49
42. OTHER FAB. METAL PRODUCTS	0.13	0.14	0.15	0.15	0.16	0.16	3.40
47. METALWORKING MACH. & EQ.	0.16	0.16	0.17	0.18	0.19	0.19	3.74
49. GENERAL INDUSTRY MACHINERY	2.24	2.29	2.40	2.46	2.51	2.55	2.62
56. RADIO, TV, & COMMUNICATION EQ.	0.11	0.11	0.11	0.12	0.12	0.12	1.89
57. ELECTRONIC COMPONENTS & ACCESS.	0.16	0.17	0.18	0.19	0.19	0.20	3.62
59. MOTOR VEHICLES & EQUIPMENT	0.42	0.44	0.45	0.46	0.46	0.47	2.22
60. AIRCRAFT & PARTS	0.83	0.86	0.89	0.92	0.92	0.92	2.00
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.05	1.72
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.43	0.44	0.46	0.47	0.48	0.48	2.17
82. GOVERNMENT INDUSTRY	0.17	0.17	0.17	0.18	0.18	0.18	1.28
TOTAL, ALL INDUSTRIES	6.82	7.01	7.26	7.44	7.53	7.60	2.17

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
99. PUNCH PRESS SETTERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.16	0.18	0.19	0.21	0.22	0.23	8.02
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.77
37. PRIMARY FERROUS METALS	0.01	0.01	0.01	0.01	0.01	0.01	7.50
38. NONFERROUS METALS	0.02	0.03	0.03	0.03	0.03	0.04	8.87
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.09	0.10	0.11	0.12	0.13	0.14	8.01
41. SCREW MACHINE PROD.&STAMPINGS	0.17	0.19	0.21	0.23	0.24	0.25	7.69
42. OTHER FAB. METAL PRODUCTS	0.04	0.04	0.05	0.05	0.06	0.06	9.91
47. METALWORKING MACH. & EQ.	0.02	0.02	0.02	0.02	0.02	0.02	9.37
49. GENERAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.03	0.03	0.03	7.49
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.02	0.02	0.02	0.02	7.59
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.33
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.02	0.03	0.03	0.03	13.37
53. ELECTRICAL MACHINERY	0.04	0.05	0.05	0.06	0.06	0.07	8.93
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.03	0.03	0.03	0.03	0.03	8.27
56. RADIO, TV, & COMMUNICATION EQ.	0.10	0.12	0.13	0.14	0.15	0.15	7.84
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.05	0.06	0.06	0.07	0.07	11.34
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.03	0.04	0.04	0.05	0.06	0.07	17.15
60. AIRCRAFT & PARTS	0.16	0.19	0.20	0.23	0.24	0.25	8.59
61. OTHER TRANSPORTATION EQ.	0.11	0.12	0.12	0.12	0.13	0.13	4.22
62. INSTRUMENTS & SUPPLIES	0.08	0.09	0.10	0.11	0.11	0.12	8.33
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.38
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.05
82. GOVERNMENT INDUSTRY	0.00	0.00	0.00	0.00	0.00	0.00	--
TOTAL, ALL INDUSTRIES	1.23	1.38	1.50	1.64	1.75	1.82	8.27
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.26	0.26	0.27	0.27	0.28	0.28	1.90
23. OTHER FURNITURE & FIXTURES	0.68	0.69	0.71	0.73	0.75	0.77	2.34
37. PRIMARY FERROUS METALS	0.10	0.10	0.10	0.10	0.10	0.10	1.15
38. NONFERROUS METALS	0.28	0.29	0.30	0.31	0.31	0.31	2.30
39. METAL CONTAINERS	0.63	0.62	0.62	0.63	0.63	0.64	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	2.06	2.08	2.13	2.21	2.27	2.31	2.26
41. SCREW MACHINE PROD.&STAMPINGS	2.81	2.95	3.05	3.10	3.11	3.12	2.16
42. OTHER FAB. METAL PRODUCTS	0.83	0.86	0.90	0.93	0.95	0.98	3.20

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
99. PUNCH PRESS SETTERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
47. METALWORKING MACH. & EQ.	0.31	0.32	0.34	0.35	0.36	0.37	3.77
49. GENERAL INDUSTRY MACHINERY	0.46	0.47	0.50	0.51	0.52	0.53	2.60
50. MISC. NONELECTRICAL MACH.	0.11	0.12	0.12	0.12	0.12	0.13	2.28
51. OFFICE, COMPUTING & ACCT. MACH.	0.24	0.25	0.26	0.26	0.27	0.27	2.73
52. SERVICE INDUSTRY MACHINES	1.02	1.06	1.12	1.13	1.14	1.14	2.10
53. ELECTRICAL MACHINERY	0.88	0.89	0.93	0.95	0.96	0.97	1.89
55. ELECTRIC LIGHTING & WIRING EQ.	0.49	0.50	0.51	0.52	0.53	0.54	1.72
56. RADIO, TV, & COMMUNICATION EQ.	0.24	0.25	0.25	0.26	0.26	0.26	1.71
57. ELECTRONIC COMPONENTS & ACCESS.	0.19	0.20	0.21	0.21	0.22	0.23	3.62
58. MISC. ELECTRICAL MACH. & EQ.	0.34	0.35	0.37	0.37	0.37	0.38	2.13
59. MOTOR VEHICLES & EQUIPMENT	1.64	1.71	1.77	1.80	1.82	1.83	2.23
60. AIRCRAFT & PARTS	0.33	0.34	0.35	0.36	0.36	0.36	1.99
61. OTHER TRANSPORTATION EQ.	0.38	0.39	0.41	0.42	0.42	0.43	2.80
62. INSTRUMENTS & SUPPLIES	0.68	0.70	0.72	0.75	0.77	0.79	2.86
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.13	0.13	0.14	0.15	0.15	0.15	3.03
64. MISC. MANUFACTURING	0.71	0.72	0.74	0.76	0.77	0.78	2.01
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	-0.50
TOTAL, ALL INDUSTRIES	17.34	17.83	18.46	18.93	19.20	19.41	2.28

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
100. ROLLING MILL OPERATORS&HELPERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
37. PRIMARY FERROUS METALS	0.40	0.44	0.48	0.51	0.54	0.56	6.94
38. NONFERROUS METALS	0.27	0.31	0.34	0.38	0.41	0.43	9.77
TOTAL, ALL INDUSTRIES	0.67	0.75	0.82	0.89	0.95	0.99	8.11
TOTAL EMPLOYMENT							
37. PRIMARY FERROUS METALS	5.65	5.77	5.90	5.92	5.90	5.83	0.63
38. NONFERROUS METALS	3.16	3.29	3.44	3.56	3.63	3.69	3.15
TOTAL, ALL INDUSTRIES	8.86	9.12	9.39	9.53	9.58	9.58	1.55

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
101. SHEAR&SLITTER SETTERS  
(THOUSANDS OF PERSONS)

INDUSTRY								AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87	
-----								
DEFENSE INDUCED EMPLOYMENT								
13. ORDNANCE & ACCESSORIES	0.02	0.02	0.03	0.03	0.03	0.03		9.69
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.05	0.05	0.05		6.94
38. NONFERROUS METALS	0.02	0.02	0.02	0.03	0.03	0.03		9.72
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05		7.37
41. SCREW MACHINE PROD.&STAMPINGS	0.02	0.02	0.02	0.02	0.02	0.02		7.66
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01		9.75
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01		7.31
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.02		13.38
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01		9.04
56. RADIO, TV, & COMMUNICATION EQ.	0.02	0.03	0.03	0.03	0.03	0.03		8.15
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.01	0.02	0.02		11.24
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.02	0.02		17.15
60. AIRCRAFT & PARTS	0.04	0.04	0.05	0.05	0.05	0.05		8.54
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02		2.96
62. INSTRUMENTS & SUPPLIES	0.01	0.01	0.01	0.01	0.01	0.01		8.21
TOTAL, ALL INDUSTRIES	0.29	0.33	0.36	0.39	0.42	0.44		8.44
TOTAL EMPLOYMENT								
13. ORDNANCE & ACCESSORIES	0.03	0.04	0.04	0.04	0.04	0.04		3.48
37. PRIMARY FERROUS METALS	0.59	0.60	0.61	0.62	0.61	0.61		0.62
38. NONFERROUS METALS	0.23	0.24	0.25	0.26	0.26	0.27		3.10
40. FAB. STRUCTURAL METAL PRODUCTS	0.80	0.80	0.82	0.84	0.85	0.87		1.65
41. SCREW MACHINE PROD.&STAMPINGS	0.26	0.28	0.28	0.29	0.29	0.29		2.13
42. OTHER FAB. METAL PRODUCTS	0.19	0.20	0.21	0.21	0.22	0.22		3.04
51. OFFICE, COMPUTING & ACCT. MACH.	0.16	0.17	0.17	0.18	0.18	0.18		2.72
52. SERVICE INDUSTRY MACHINES	0.48	0.50	0.52	0.53	0.53	0.53		2.12
53. ELECTRICAL MACHINERY	0.15	0.15	0.16	0.16	0.17	0.17		1.99
56. RADIO, TV, & COMMUNICATION EQ.	0.06	0.06	0.06	0.06	0.06	0.06		2.00
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.05	0.05		3.53
59. MOTOR VEHICLES & EQUIPMENT	0.42	0.44	0.46	0.46	0.47	0.47		2.23
60. AIRCRAFT & PARTS	0.08	0.08	0.08	0.09	0.09	0.09		1.95
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.05		1.56
62. INSTRUMENTS & SUPPLIES	0.06	0.06	0.07	0.07	0.07	0.07		2.75
TOTAL, ALL INDUSTRIES	4.84	4.96	5.13	5.24	5.31	5.35		2.03

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE

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BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
102. SHEET-METAL WORKERS&TINSMITHS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.01	0.01	0.01	0.01	0.01	0.01	4.16
11. NEW CONSTRUCTION	3.29	3.70	3.97	4.37	4.69	4.90	8.33
13. ORDNANCE & ACCESSORIES	1.00	1.14	1.25	1.36	1.45	1.51	8.67
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.02	4.32
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.27
27. CHEMICALS & PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	7.87
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.02	0.02	8.71
32. RUBBER & MISC. PLASTICS PROD.	0.01	0.01	0.01	0.01	0.01	0.02	10.41
36. STONE & CLAY PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	8.10
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.06	0.06	0.06	7.32
38. NONFERROUS METALS	0.03	0.03	0.03	0.04	0.04	0.04	9.78
40. FAB. STRUCTURAL METAL PRODUCTS	0.72	0.81	0.85	0.91	0.95	0.99	6.51
41. SCREW MACHINE PROD.&STAMPINGS	0.05	0.06	0.06	0.07	0.07	0.08	7.68
42. OTHER FAB. METAL PRODUCTS	0.04	0.04	0.05	0.05	0.06	0.06	9.76
43. ENGINES & TURBINES	0.02	0.02	0.03	0.03	0.03	0.03	7.75
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.03	0.03	0.03	0.03	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.04	0.04	0.05	0.05	0.06	0.06	9.12
47. METALWORKING MACH. & EQ.	0.04	0.05	0.06	0.06	0.07	0.07	9.37
48. SPECIAL INDUSTRY MACHINERY	0.03	0.03	0.03	0.04	0.04	0.05	12.06
49. GENERAL INDUSTRY MACHINERY	0.14	0.16	0.17	0.19	0.20	0.21	7.51
50. MISC. NONELECTRICAL MACH.	0.35	0.38	0.42	0.46	0.49	0.50	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.03	0.03	0.03	0.04	0.04	0.04	7.32
52. SERVICE INDUSTRY MACHINES	0.08	0.09	0.10	0.11	0.13	0.14	13.37
53. ELECTRICAL MACHINERY	0.11	0.12	0.13	0.14	0.16	0.16	8.84
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.06	8.26
56. RADIO, TV, & COMMUNICATION EQ.	0.63	0.72	0.79	0.86	0.91	0.93	8.20
57. ELECTRONIC COMPONENTS & ACCESS.	0.27	0.32	0.36	0.40	0.43	0.45	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.09	0.11	0.12	0.15	0.17	0.20	17.14
60. AIRCRAFT & PARTS	3.04	3.44	3.79	4.18	4.47	4.59	8.59
61. OTHER TRANSPORTATION EQ.	1.08	1.14	1.17	1.20	1.24	1.28	3.43
62. INSTRUMENTS & SUPPLIES	0.14	0.16	0.18	0.19	0.21	0.21	7.99
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.02	0.02	0.02	8.56
64. MISC. MANUFACTURING	0.02	0.03	0.03	0.03	0.03	0.03	3.35
65. TRANSPORTATION & WAREHOUSING	0.17	0.18	0.19	0.19	0.20	0.20	2.71
69. WHOLESALE & RETAIL TRADE	0.03	0.03	0.04	0.04	0.04	0.04	9.16
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.02	0.02	0.02	0.02	0.02	10.97



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
102. SHEET-METAL WORKERS&TINSMITHS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
73. BUSINESS SERVICES	0.01	0.01	0.01	0.02	0.02	0.02	7.80
77. MISC. SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	2.50
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.69	0.71	0.73	0.77	0.79	0.80	2.99
82. GOVERNMENT INDUSTRY	10.45	10.24	10.42	10.69	10.85	10.91	0.86
TOTAL, ALL INDUSTRIES	22.88	24.11	25.41	27.01	28.22	28.93	4.81
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.16	0.16	0.16	0.16	0.15	0.15	-0.62
11. NEW CONSTRUCTION	87.46	89.01	90.54	93.14	95.14	96.21	1.93
13. ORDNANCE & ACCESSORIES	1.65	1.70	1.75	1.80	1.84	1.87	2.52
23. OTHER FURNITURE & FIXTURES	0.78	0.78	0.80	0.83	0.84	0.86	1.90
24. PAPER & ALLIED PRODUCTS	0.41	0.42	0.43	0.43	0.42	0.42	0.46
27. CHEMICALS & PRODUCTS	0.59	0.60	0.61	0.62	0.62	0.63	1.34
28. PLASTICS & SYNTHETIC MATLS.	0.44	0.46	0.48	0.49	0.49	0.50	2.32
32. RUBBER & MISC. PLASTICS PROD.	0.35	0.36	0.38	0.39	0.40	0.41	2.98
36. STONE & CLAY PRODUCTS	0.70	0.71	0.72	0.74	0.74	0.73	0.88
37. PRIMARY FERROUS METALS	0.62	0.64	0.66	0.66	0.66	0.65	0.98
38. NONFERROUS METALS	0.32	0.34	0.35	0.36	0.37	0.38	3.16
40. FAB. STRUCTURAL METAL PRODUCTS	16.23	16.09	16.31	16.68	16.87	16.92	0.84
41. SCREW MACHINE PROD.&STAMPINGS	0.87	0.91	0.94	0.96	0.96	0.97	2.15
42. OTHER FAB. METAL PRODUCTS	0.84	0.86	0.90	0.93	0.95	0.97	3.06
43. ENGINES & TURBINES	0.25	0.26	0.27	0.27	0.27	0.28	1.81
45. CONSTR. & MINING MACHINERY	1.85	1.95	2.05	2.13	2.18	2.21	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.66	0.68	0.72	0.75	0.77	0.79	3.62
47. METALWORKING MACH. & EQ.	0.85	0.89	0.94	0.98	1.00	1.02	3.77
48. SPECIAL INDUSTRY MACHINERY	3.56	3.64	3.82	3.99	4.09	4.18	3.22
49. GENERAL INDUSTRY MACHINERY	3.25	3.34	3.49	3.59	3.65	3.70	2.62
50. MISC. NONELECTRICAL MACH.	3.04	3.12	3.26	3.33	3.36	3.40	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	0.74	0.77	0.81	0.82	0.83	0.85	2.73
52. SERVICE INDUSTRY MACHINES	4.24	4.41	4.62	4.69	4.70	4.71	2.10
53. ELECTRICAL MACHINERY	2.13	2.16	2.25	2.30	2.32	2.33	1.81
55. ELECTRIC LIGHTING & WIRING EQ.	0.89	0.90	0.92	0.94	0.96	0.97	1.71
56. RADIO, TV, & COMMUNICATION EQ.	1.48	1.52	1.57	1.60	1.61	1.64	2.04
57. ELECTRONIC COMPONENTS & ACCESS.	1.21	1.26	1.33	1.38	1.42	1.45	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.43	0.45	0.47	0.47	0.48	0.48	2.13
59. MOTOR VEHICLES & EQUIPMENT	4.73	4.94	5.11	5.19	5.25	5.28	2.23
60. AIRCRAFT & PARTS	6.08	6.33	6.50	6.70	6.72	6.71	2.00
61. OTHER TRANSPORTATION EQ.	3.72	3.83	3.97	4.06	4.07	4.11	2.02

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
102. SHEET-METAL WORKERS & TINSMITHS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
62. INSTRUMENTS & SUPPLIES	1.24	1.26	1.31	1.36	1.39	1.41	2.54
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.27	0.28	0.29	0.30	0.31	0.32	3.20
64. MISC. MANUFACTURING	2.19	2.17	2.19	2.19	2.17	2.13	-0.58
65. TRANSPORTATION & WAREHOUSING	4.10	4.12	4.14	4.17	4.13	4.06	-0.17
69. WHOLESALE & RETAIL TRADE	4.70	4.83	4.96	5.06	5.14	5.22	2.14
72. PERSONAL SERVICES EXC. AUTO.	0.73	0.76	0.80	0.83	0.87	0.90	4.28
73. BUSINESS SERVICES	0.25	0.25	0.26	0.27	0.27	0.28	2.45
77. MISC. SERVICES	1.28	1.28	1.28	1.29	1.30	1.32	0.58
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	5.66	5.75	5.88	6.03	6.13	6.18	1.79
82. GOVERNMENT INDUSTRY	21.44	21.38	21.58	21.96	22.33	22.63	1.08
TOTAL, ALL INDUSTRIES	195.63	198.88	203.18	208.31	211.72	213.79	1.79

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
103. TOOL&DIE MAKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN
							% GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.14	1.28	1.39	1.50	1.57	1.63	7.38
19. MISC. FABRICATED TEXTILE PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.69
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.02	0.02	0.02	4.55
24. PAPER & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.09
25. PAPERBOARD CONTAINERS & BOXES	0.03	0.03	0.04	0.04	0.04	0.05	8.78
27. CHEMICALS & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	7.96
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.02	0.02	0.02	0.02	8.69
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.24
32. RUBBER & MISC. PLASTICS PROD.	0.15	0.16	0.18	0.19	0.21	0.22	7.95
36. STONE & CLAY PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	7.55
37. PRIMARY FERROUS METALS	0.07	0.08	0.08	0.09	0.09	0.09	6.04
38. NONFERROUS METALS	0.28	0.32	0.34	0.37	0.40	0.41	8.38
39. METAL CONTAINERS	0.01	0.01	0.01	0.02	0.02	0.02	5.56
40. FAB. STRUCTURAL METAL PRODUCTS	0.24	0.27	0.29	0.30	0.32	0.33	6.34
41. SCREW MACHINE PROD.&STAMPINGS	0.87	0.95	1.01	1.09	1.13	1.16	6.03
42. OTHER FAB. METAL PRODUCTS	0.18	0.21	0.23	0.26	0.28	0.29	9.97
43. ENGINES & TURBINES	0.18	0.21	0.23	0.24	0.26	0.27	7.72
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.02	0.02	0.02	0.02	5.29
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.03	0.03	0.03	0.03	0.03	7.13
47. METALWORKING MACH. & EQ.	1.90	2.17	2.38	2.61	2.79	2.90	8.78
48. SPECIAL INDUSTRY MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	12.06
49. GENERAL INDUSTRY MACHINERY	0.10	0.11	0.12	0.13	0.13	0.14	6.18
50. MISC. NONELECTRICAL MACH.	0.53	0.57	0.62	0.67	0.71	0.72	6.58
51. OFFICE, COMPUTING & ACCT. MACH.	0.06	0.07	0.07	0.07	0.08	0.08	4.98
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.03	0.03	0.03	0.04	13.37
53. ELECTRICAL MACHINERY	0.15	0.17	0.19	0.20	0.22	0.22	7.79
55. ELECTRIC LIGHTING & WIRING EQ.	0.12	0.13	0.14	0.15	0.16	0.16	5.21
56. RADIO, TV, & COMMUNICATION EQ.	1.49	1.71	1.88	2.03	2.14	2.19	8.04
57. ELECTRONIC COMPONENTS & ACCESS.	0.62	0.73	0.81	0.90	0.97	1.01	10.27
58. MISC. ELECTRICAL MACH. & EQ.	0.06	0.07	0.07	0.08	0.09	0.09	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.26	0.30	0.35	0.41	0.48	0.56	17.12
60. AIRCRAFT & PARTS	2.52	2.85	3.13	3.45	3.68	3.78	8.42
61. OTHER TRANSPORTATION EQ.	0.23	0.24	0.25	0.25	0.26	0.27	3.78
62. INSTRUMENTS & SUPPLIES	0.42	0.48	0.52	0.57	0.60	0.62	7.95
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.06	0.06	0.07	0.07	0.08	0.08	8.52
64. MISC. MANUFACTURING	0.03	0.03	0.03	0.04	0.04	0.04	4.84
65. TRANSPORTATION & WAREHOUSING	0.01	0.01	0.01	0.01	0.01	0.01	3.03

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
103. TOOL&DIE MAKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
69. WHOLESALE & RETAIL TRADE	0.01	0.01	0.01	0.01	0.01	0.01	9.38
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	12.23
73. BUSINESS SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	7.58
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.31	0.34	0.36	0.39	0.40	0.41	5.37
82. GOVERNMENT INDUSTRY	0.92	0.90	0.92	0.94	0.95	0.96	0.86
TOTAL, ALL INDUSTRIES	13.15	14.71	15.96	17.36	18.42	19.03	7.66
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.89	1.92	1.95	1.98	2.00	2.01	1.30
19. MISC. FABRICATED TEXTILE PROO.	0.20	0.20	0.21	0.21	0.21	0.22	1.86
23. OTHER FURNITURE & FIXTURES	0.86	0.87	0.90	0.92	0.94	0.96	2.13
24. PAPER & ALLIED PRODUCTS	0.38	0.39	0.40	0.40	0.40	0.40	1.23
25. PAPERBOARD CONTAINERS & BOXES	1.38	1.42	1.45	1.48	1.50	1.51	1.72
27. CHEMICALS & PROOUCTS	0.32	0.33	0.34	0.34	0.34	0.35	1.42
28. PLASTICS & SYNTHETIC MATLS.	0.63	0.65	0.67	0.69	0.70	0.70	2.30
30. PAINTS & ALLIED PRODUCTS.	0.11	0.11	0.12	0.12	0.13	0.13	3.02
32. RUBBER & MISC. PLASTICS PROO.	5.42	5.48	5.58	5.64	5.67	5.61	0.68
36. STONE & CLAY PRODUCTS	0.69	0.70	0.71	0.72	0.72	0.70	0.36
37. PRIMARY FERROUS METALS	0.98	0.99	1.01	1.00	0.99	0.97	-0.23
38. NONFERROUS METALS	3.28	3.37	3.48	3.55	3.57	3.59	1.84
39. METAL CONTAINERS	0.88	0.86	0.85	0.86	0.86	0.86	-0.63
40. FAB. STRUCTURAL METAL PROOUCTS	5.47	5.41	5.48	5.59	5.65	5.66	0.68
41. SCREW MACHINE PROD.&STAMPINGS	14.16	14.63	14.86	14.88	14.74	14.58	0.59
42. OTHER FAB. METAL PROOUCTS	3.98	4.11	4.30	4.44	4.55	4.67	3.25
43. ENGINES & TURBINES	2.22	2.29	2.37	2.40	2.41	2.42	1.78
45. CONSTR. & MINING MACHINERY	1.11	1.15	1.19	1.21	1.22	1.21	1.76
46. MATERIALS HANDLING MACH. & EQ.	0.40	0.40	0.42	0.43	0.43	0.43	1.74
47. METALWORKING MACH. & EQ.	36.99	38.28	40.34	41.75	42.74	43.32	3.21
48. SPECIAL INDUSTRY MACHINERY	1.82	1.86	1.95	2.04	2.09	2.13	3.22
49. GENERAL INDUSTRY MACHINERY	2.32	2.35	2.43	2.46	2.47	2.48	1.35
50. MISC. NONELECTRICAL MACH.	4.59	4.67	4.82	4.89	4.89	4.91	1.32
51. OFFICE, COMPUTING & ACCT. MACH.	1.60	1.62	1.65	1.64	1.63	1.64	0.48
52. SERVICE INDUSTRY MACHINES	1.15	1.20	1.26	1.28	1.28	1.28	2.10
53. ELECTRICAL MACHINERY	3.08	3.09	3.19	3.22	3.22	3.20	0.82
55. ELECTRIC LIGHTING & WIRING EQ.	2.57	2.51	2.50	2.49	2.46	2.43	-1.16
56. RADIO, TV, & COMMUNICATION EQ.	3.52	3.60	3.71	3.77	3.80	3.86	1.90
57. ELECTRONIC COMPONENTS & ACCESS.	2.82	2.91	3.02	3.12	3.17	3.21	2.63
58. MISC. ELECTRICAL MACH. & EQ.	2.12	2.20	2.28	2.31	2.34	2.36	2.12

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
103. TOOL&DIE MAKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
59. MOTOR VEHICLES & EQUIPMENT	13.19	13.79	14.25	14.48	14.84	14.72	2.21
60. AIRCRAFT & PARTS	5.05	5.24	5.38	5.54	5.54	5.53	1.84
61. OTHER TRANSPORTATION EQ.	0.78	0.81	0.84	0.86	0.87	0.88	2.36
62. INSTRUMENTS & SUPPLIES	3.64	3.69	3.83	3.96	4.06	4.12	2.50
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	1.27	1.29	1.35	1.41	1.45	1.49	3.16
64. MISC. MANUFACTURING	2.68	2.69	2.75	2.80	2.81	2.80	0.85
65. TRANSPORTATION & WAREHOUSING	0.18	0.18	0.18	0.16	0.16	0.16	0.14
69. WHOLESALE & RETAIL TRADE	1.25	1.28	1.32	1.35	1.38	1.40	2.35
72. PERSONAL SERVICES EXC. AUTO.	0.37	0.39	0.42	0.44	0.46	0.49	5.47
73. BUSINESS SERVICES	0.19	0.19	0.20	0.20	0.21	0.21	2.24
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.04	3.12	3.23	3.30	3.33	3.35	1.96
82. GOVERNMENT INDUSTRY	2.20	2.19	2.21	2.24	2.27	2.30	0.88
TOTAL, ALL INDUSTRIES	146.43	150.22	155.28	158.63	160.41	161.39	1.96

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
104. METALWORKING CRAFT WORKERS NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.07	0.08	0.09	0.09	0.09	0.10	6.49
37. PRIMARY FERROUS METALS	0.30	0.34	0.38	0.39	0.42	0.44	7.53
38. NONFERROUS METALS	0.08	0.09	0.09	0.10	0.11	0.12	9.27
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.05	0.05	0.06	0.06	0.07	8.29
41. SCREW MACHINE PROD.&STAMPINGS	0.07	0.08	0.09	0.10	0.10	0.11	7.69
42. OTHER FAB. METAL PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.05	9.94
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.37
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	8.95
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.02	0.02	0.02	8.27
56. RADIO, TV, & COMMUNICATION EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.25
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.02	0.02	0.02	11.38
60. AIRCRAFT & PARTS	0.09	0.10	0.11	0.12	0.13	0.13	8.52
82. GOVERNMENT INDUSTRY	1.71	1.68	1.71	1.75	1.78	1.78	0.82
TOTAL, ALL INDUSTRIES	2.51	2.58	2.68	2.81	2.91	2.96	3.34
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.12	0.12	0.12	0.12	0.12	0.12	0.47
37. PRIMARY FERROUS METALS	4.26	4.38	4.50	4.54	4.55	4.52	1.18
38. NONFERROUS METALS	0.89	0.92	0.96	0.99	1.00	1.02	2.68
40. FAB. STRUCTURAL METAL PRODUCTS	0.98	0.99	1.02	1.06	1.09	1.11	2.52
41. SCREW MACHINE PROD.&STAMPINGS	1.21	1.27	1.31	1.33	1.34	1.35	2.16
42. OTHER FAB. METAL PRODUCTS	0.63	0.65	0.68	0.70	0.72	0.74	3.23
47. METALWORKING MACH. & EQ.	0.16	0.17	0.18	0.18	0.19	0.19	3.77
53. ELECTRICAL MACHINERY	0.21	0.21	0.22	0.23	0.23	0.23	1.91
55. ELECTRIC LIGHTING & WIRING EQ.	0.24	0.24	0.25	0.25	0.26	0.26	1.72
56. RADIO, TV, & COMMUNICATION EQ.	0.11	0.11	0.12	0.12	0.12	0.12	2.09
57. ELECTRONIC COMPONENTS & ACCESS.	0.05	0.05	0.05	0.05	0.06	0.06	3.66
60. AIRCRAFT & PARTS	0.18	0.18	0.19	0.19	0.19	0.19	1.93
82. GOVERNMENT INDUSTRY	4.33	4.38	4.45	4.59	4.72	4.80	2.07
TOTAL, ALL INDUSTRIES	14.31	14.64	15.06	15.41	15.65	15.78	1.97

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
105. PRINTING TRADES CRAFT WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.06	0.07	0.08	0.08	0.08	0.09	6.43
16. FABRIC, YARN & THREAD MILLS	0.01	0.02	0.02	0.02	0.02	0.02	5.36
19. MISC. FABRICATED TEXTILE PROD.	0.02	0.02	0.02	0.02	0.02	0.03	4.67
24. PAPER & ALLIED PRODUCTS	0.19	0.21	0.22	0.24	0.25	0.26	6.89
25. PAPERBOARD CONTAINERS & BOXES	0.11	0.12	0.13	0.14	0.16	0.16	8.78
26. PRINTING & PUBLISHING	4.74	5.10	5.42	5.79	6.04	6.17	5.40
27. CHEMICALS & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.45
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	8.23
32. RUBBER & MISC. PLASTICS PROD.	0.05	0.06	0.06	0.07	0.08	0.08	10.28
35. GLASS & GLASS PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	12.70
37. PRIMARY FERROUS METALS	0.02	0.02	0.02	0.02	0.03	0.03	7.53
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.03	0.03	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	0.04	0.04	0.05	0.05	0.05	0.06	8.09
41. SCREW MACHINE PROD. & STAMPINGS	0.03	0.03	0.03	0.04	0.04	0.04	7.68
42. OTHER FAB. METAL PRODUCTS	0.08	0.09	0.09	0.10	0.11	0.12	9.20
47. METALWORKING MACH. & EQ.	0.02	0.03	0.03	0.03	0.03	0.04	9.36
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.50
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.02	0.02	0.02	7.48
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.04	0.05	0.05	0.05	0.05	7.32
53. ELECTRICAL MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	8.85
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.29
56. RADIO, TV, & COMMUNICATION EQ.	0.53	0.61	0.67	0.72	0.76	0.78	7.80
57. ELECTRONIC COMPONENTS & ACCESS.	0.74	0.88	0.99	1.11	1.21	1.27	11.37
60. AIRCRAFT & PARTS	0.16	0.18	0.20	0.22	0.23	0.24	8.58
61. OTHER TRANSPORTATION EQ.	0.04	0.04	0.05	0.05	0.05	0.05	3.11
62. INSTRUMENTS & SUPPLIES	0.05	0.05	0.06	0.06	0.07	0.07	8.21
64. MISC. MANUFACTURING	0.04	0.04	0.04	0.05	0.05	0.05	3.93
69. WHOLESALE & RETAIL TRADE	0.02	0.02	0.02	0.02	0.02	0.02	8.40
70. FINANCE & INSURANCE	0.03	0.03	0.03	0.04	0.04	0.04	9.00
73. BUSINESS SERVICES	0.34	0.37	0.40	0.43	0.45	0.46	6.44
77. MISC. SERVICES	0.06	0.06	0.06	0.06	0.06	0.06	1.90
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.59	0.61	0.64	0.67	0.69	0.70	3.44
82. GOVERNMENT INDUSTRY	4.38	4.27	4.32	4.40	4.44	4.44	0.27
TOTAL, ALL INDUSTRIES	12.55	13.20	13.90	14.73	15.30	15.58	4.42

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
105. PRINTING TRADES CRAFT WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
13. ORDNANCE & ACCESSORIES	0.11	0.11	0.11	0.11	0.11	0.11	0.41
16. FABRIC, YARN & THREAD MILLS	1.17	1.21	1.24	1.27	1.28	1.29	1.96
19. MISC. FABRICATED TEXTILE PROO.	0.69	0.70	0.72	0.74	0.75	0.75	1.84
24. PAPER & ALLIED PRODUCTS	10.10	10.42	10.55	10.61	10.63	10.63	1.04
25. PAPERBOARD CONTAINERS & BOXES	4.87	5.00	5.12	5.21	5.27	5.30	1.71
26. PRINTING & PUBLISHING	301.78	300.77	300.92	301.04	300.16	299.13	-0.18
27. CHEMICALS & PRODUCTS	0.21	0.22	0.22	0.22	0.22	0.22	0.95
30. PAINTS & ALLIED PRODUCTS	0.24	0.25	0.28	0.27	0.28	0.28	3.01
32. RUBBER & MISC. PLASTICS PROO.	1.85	1.91	1.99	2.06	2.11	2.13	2.85
35. GLASS & GLASS PRODUCTS	0.62	0.65	0.69	0.71	0.73	0.74	3.72
37. PRIMARY FERROUS METALS	0.27	0.27	0.28	0.29	0.29	0.28	1.18
39. METAL CONTAINERS	1.34	1.32	1.33	1.35	1.36	1.37	0.38
40. FAB. STRUCTURAL METAL PRODUCTS	0.84	0.85	0.87	0.91	0.93	0.94	2.33
41. SCREW MACHINE PROD. & STAMPINGS	0.47	0.50	0.51	0.52	0.52	0.52	2.15
42. OTHER FAB. METAL PRODUCTS	1.65	1.70	1.76	1.81	1.84	1.87	2.53
47. METALWORKING MACH. & EQ.	0.45	0.47	0.49	0.51	0.53	0.54	3.77
49. GENERAL INDUSTRY MACHINERY	0.20	0.21	0.22	0.22	0.23	0.23	2.61
50. MISC. NONELECTRICAL MACH.	0.10	0.11	0.11	0.11	0.12	0.12	2.17
51. OFFICE, COMPUTING & ACCT. MACH.	0.97	1.01	1.05	1.07	1.08	1.11	2.72
53. ELECTRICAL MACHINERY	0.28	0.28	0.30	0.30	0.31	0.31	1.82
55. ELECTRIC LIGHTING & WIRING EQ.	0.14	0.14	0.14	0.14	0.15	0.15	1.74
56. RADIO, TV, & COMMUNICATION EQ.	1.26	1.29	1.32	1.34	1.35	1.37	1.67
57. ELECTRONIC COMPONENTS & ACCESS.	3.37	3.52	3.69	3.84	3.95	4.04	3.65
60. AIRCRAFT & PARTS	0.32	0.33	0.34	0.35	0.35	0.35	1.98
61. OTHER TRANSPORTATION EQ.	0.15	0.15	0.15	0.16	0.16	0.16	1.70
62. INSTRUMENTS & SUPPLIES	0.40	0.41	0.43	0.44	0.46	0.46	2.75
64. MISC. MANUFACTURING	3.63	3.61	3.65	3.68	3.67	3.62	-0.03
69. WHOLESALE & RETAIL TRADE	2.65	2.71	2.76	2.80	2.82	2.85	1.43
70. FINANCE & INSURANCE	3.00	3.04	3.09	3.16	3.24	3.31	1.94
73. BUSINESS SERVICES	6.94	7.01	7.10	7.23	7.31	7.35	1.15
77. MISC. SERVICES	8.68	8.61	8.56	8.57	8.61	8.68	-0.01
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	15.25	15.25	15.30	15.36	15.35	15.34	0.12
82. GOVERNMENT INDUSTRY	15.97	15.82	15.88	16.02	16.18	16.30	0.40
TOTAL, ALL INDUSTRIES	396.02	396.00	397.47	398.89	398.83	398.39	0.12

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
106. OTHER CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.06	0.06	0.06	0.06	0.06	0.07	2.60
2. DTHER AGRICULTURAL PRODUCTS	0.10	0.10	0.10	0.11	0.11	0.12	2.57
3. FORESTRY & FISHERY PRODUCTS	0.03	0.03	0.04	0.04	0.04	0.04	5.83
4. AGR., FORESTRY, & FISHERY SERV.	0.13	0.15	0.15	0.17	0.18	0.19	6.86
5. IRON ORE MINING	0.31	0.36	0.39	0.42	0.44	0.45	7.72
6. NONFERROUS METAL MINING	0.53	0.62	0.69	0.77	0.84	0.90	11.07
7. COAL MINING	1.56	1.78	1.97	2.16	2.36	2.48	9.69
8. CRUDE PETROLEUM & N. GAS	2.38	2.54	2.62	2.77	2.91	2.93	4.27
9. STONE&CLAY MINING & QUARRYING	0.54	0.60	0.66	0.74	0.81	0.86	9.94
10. CHEM&FERTILIZER MIN. MINING	0.06	0.07	0.07	0.08	0.08	0.09	7.91
11. NEW CONSTRUCTION	11.69	13.19	14.16	15.61	16.77	17.56	8.48
13. ORDNANCE & ACCESSORIES	11.34	12.82	13.97	15.09	15.91	16.50	7.79
14. FOOD & KINDRED PRODUCTS	0.69	0.75	0.78	0.83	0.86	0.88	5.19
15. TOBACCO MANUFACTURES	0.01	0.01	0.01	0.01	0.01	0.01	6.26
16. FABRIC, YARN & THREAD MILLS	0.39	0.42	0.44	0.46	0.48	0.50	4.96
17. MISC. TEXTILE GOODS	0.14	0.15	0.16	0.17	0.19	0.19	7.32
18. APPAREL	0.29	0.31	0.32	0.35	0.37	0.39	6.42
19. MISC. FABRICATED TEXTILE PROD.	0.30	0.31	0.33	0.35	0.36	0.37	4.32
20. LUMBER & WOOD PRODUCTS	1.39	1.57	1.68	1.82	1.97	2.08	8.34
21. WOOD CONTAINERS	0.13	0.15	0.17	0.18	0.20	0.21	9.82
22. HOUSEHOLD FURNITURE	0.36	0.38	0.41	0.42	0.43	0.43	3.70
23. OTHER FURNITURE & FIXTURES	0.36	0.37	0.39	0.41	0.43	0.45	4.74
24. PAPER & ALLIED PRODUCTS	0.89	0.97	1.05	1.12	1.18	1.22	6.50
25. PAPERBOARD CONTAINERS & BOXES	0.34	0.38	0.42	0.46	0.50	0.52	8.81
26. PRINTING & PUBLISHING	0.56	0.61	0.65	0.71	0.75	0.77	6.63
27. CHEMICALS & PRODUCTS	1.72	1.90	2.04	2.21	2.37	2.48	7.61
28. PLASTICS & SYNTHETIC MATLS.	0.48	0.53	0.59	0.65	0.69	0.72	8.66
29. DRUGS, CLEANING & TOILET PREP.	0.06	0.06	0.06	0.07	0.07	0.07	4.17
30. PAINTS & ALLIED PRODUCTS	0.13	0.14	0.16	0.17	0.19	0.19	8.26
31. PET REFINING & REL. PROD.	0.75	0.79	0.83	0.89	0.94	0.96	5.22
32. RUBBER & MISC. PLASTICS PROD.	1.75	1.98	2.21	2.48	2.72	2.87	10.39
34. FOOTWEAR & OTHER LEATHER PROD.	0.03	0.03	0.03	0.03	0.03	0.03	5.61
35. GLASS & GLASS PRODUCTS	0.41	0.46	0.50	0.55	0.59	0.63	9.13
36. STONE & CLAY PRODUCTS	1.17	1.33	1.43	1.58	1.70	1.78	8.85
37. PRIMARY FERROUS METALS	6.33	7.02	7.56	8.22	8.73	9.07	7.45
38. NONFERROUS METALS	3.06	3.51	3.86	4.26	4.60	4.82	9.50
39. METAL CONTAINERS	0.14	0.15	0.16	0.17	0.18	0.19	6.61

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108. OTHER CRAFT & RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
40. FAB. STRUCTURAL METAL PRODUCTS	2.71	3.04	3.25	3.49	3.70	3.90	7.57
41. SCREW MACHINE PRDD. & STAMPINGS	2.07	2.34	2.54	2.80	2.99	3.14	8.69
42. OTHER FAB. METAL PRODUCTS	1.25	1.43	1.58	1.73	1.87	1.97	9.57
43. ENGINES & TURBINES	0.87	0.99	1.08	1.15	1.21	1.26	7.65
44. FARM & GARDEN MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	8.31
45. CONSTR. & MINING MACHINERY	0.21	0.23	0.25	0.27	0.29	0.30	7.27
46. MATERIALS HANDLING MACH. & EQ.	0.36	0.41	0.45	0.49	0.53	0.55	9.15
47. METALWORKING MACH. & EQ.	0.95	1.09	1.20	1.33	1.42	1.48	9.21
48. SPECIAL INDUSTRY MACHINERY	0.11	0.13	0.14	0.16	0.18	0.19	12.06
49. GENERAL INDUSTRY MACHINERY	1.01	1.14	1.23	1.32	1.41	1.47	7.64
50. MISC. NONELECTRICAL MACH.	1.34	1.46	1.60	1.76	1.87	1.93	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.87	1.00	1.10	1.18	1.23	1.27	7.75
52. SERVICE INDUSTRY MACHINES	0.22	0.26	0.29	0.33	0.37	0.42	13.36
53. ELECTRICAL MACHINERY	1.33	1.52	1.67	1.84	1.98	2.08	9.35
54. HOUSEHOLD APPLIANCES	0.03	0.03	0.03	0.03	0.04	0.04	9.25
55. ELECTRIC LIGHTING & WIRING EQ.	0.70	0.80	0.86	0.95	1.02	1.07	8.75
56. RADIO, TV & COMMUNICATION EQ.	20.77	23.71	25.88	27.89	29.16	29.63	7.37
57. ELECTRONIC COMPONENTS & ACCESS.	9.08	10.81	12.17	13.61	14.85	15.56	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.40	0.46	0.50	0.56	0.60	0.63	9.57
59. MOTOR VEHICLES & EQUIPMENT	1.75	2.09	2.38	2.83	3.31	3.87	17.17
60. AIRCRAFT & PARTS	26.96	30.31	33.18	36.38	38.67	39.45	7.91
61. OTHER TRANSPORTATION EQ.	11.03	11.63	12.01	12.25	12.64	13.03	3.39
62. INSTRUMENTS & SUPPLIES	4.37	4.93	5.38	5.90	6.29	6.51	8.33
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.22	1.35	1.47	1.63	1.77	1.87	8.92
64. MISC. MANUFACTURING	0.34	0.37	0.39	0.42	0.44	0.45	5.65
65. TRANSPORTATION & WAREHOUSING	6.40	6.71	6.94	7.30	7.53	7.60	3.51
66. COMMUNICATION EXC. RADIO & TV	1.51	1.60	1.70	1.83	1.93	1.97	5.40
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.17
68. UTILITIES	2.35	2.57	2.75	2.95	3.09	3.13	5.92
69. WHOLESALE & RETAIL TRADE	2.38	2.69	2.97	3.29	3.56	3.75	9.49
70. FINANCE & INSURANCE	0.04	0.04	0.05	0.05	0.06	0.06	9.52
71. REAL ESTATE & RENTAL	0.10	0.11	0.12	0.13	0.14	0.14	7.98
72. PERSONAL SERVICES EXC. AUTO.	1.15	1.28	1.38	1.51	1.60	1.68	7.91
73. BUSINESS SERVICES	1.99	2.22	2.42	2.64	2.82	2.91	7.85
74. EATING & DRINKING PLACES	0.02	0.02	0.03	0.03	0.03	0.03	9.74
75. AUTOMOBILE REPAIR & SERVICE	0.27	0.30	0.32	0.35	0.37	0.38	7.62
76. AMUSEMENTS	0.19	0.21	0.23	0.24	0.26	0.27	6.74
77. MISC. SERVICES	0.87	0.90	0.95	1.01	1.06	1.10	4.86
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	8.59	9.17	9.68	10.23	10.56	10.72	4.52

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
106. OTHER CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	16.09	15.80	16.13	16.60	16.90	17.04	1.15
TOTAL, ALL INDUSTRIES	182.55	201.81	217.45	235.10	248.86	256.97	7.08
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	9.43	9.52	9.37	9.20	9.14	9.06	-0.80
2. OTHER AGRICULTURAL PRODUCTS	68.04	68.17	68.36	68.00	67.72	67.49	-0.16
3. FORESTRY & FISHERY PRODUCTS	1.28	1.34	1.43	1.49	1.49	1.47	2.87
4. AGR. FORESTRY & FISHERY SERV.	7.30	7.50	7.58	7.75	7.84	7.97	1.76
5. IRON ORE MINING	6.12	6.56	7.01	6.92	6.78	6.62	1.57
6. NONFERROUS METAL MINING	9.11	9.63	10.02	10.28	10.23	10.30	2.49
7. COAL MINING	55.81	59.08	61.68	63.57	66.02	67.77	3.96
8. CRUDE PETROLEUM & N. GAS	32.26	32.25	32.19	31.60	31.17	31.43	-0.52
9. STONE&CLAY MINING & QUARRYING	17.00	17.36	17.94	18.69	19.10	19.27	2.54
10. CHEM&FERTILIZER MIN. MINING	2.97	3.05	3.15	3.23	3.25	3.28	2.01
11. NEW CONSTRUCTION	311.08	317.07	322.97	332.72	340.29	344.56	2.07
13. ORONANCE & ACCESSORIES	18.76	19.18	19.50	19.95	20.20	20.40	1.69
14. FOOD & KINDRED PRODUCTS	102.80	104.32	105.06	104.80	103.88	103.15	0.07
15. TOBACCO MANUFACTURES	5.95	5.91	5.78	5.65	5.53	5.39	-1.97
16. FABRIC, YARN & THREAD MILLS	31.21	32.09	32.90	33.49	33.74	33.74	1.57
17. MISC. TEXTILE GOODS	9.40	9.77	10.20	10.55	10.75	10.85	2.91
18. APPAREL	79.60	80.54	82.65	84.49	84.87	85.18	1.36
19. MISC. FABRICATED TEXTILE PROD.	10.13	10.34	10.58	10.75	10.84	10.91	1.50
20. LUMBER & WOOD PRODUCTS	67.30	72.44	74.78	77.14	77.49	76.36	2.56
21. WOOD CONTAINERS	2.21	2.20	2.25	2.30	2.33	2.34	1.16
22. HOUSEHOLD FURNITURE	61.24	64.59	66.70	68.94	70.44	71.10	3.03
23. OTHER FURNITURE & FIXTURES	22.50	22.69	23.43	24.16	24.69	25.23	2.32
24. PAPER & ALLIED PRODUCTS	47.63	48.98	49.43	49.52	49.41	49.28	0.68
25. PAPERBOARD CONTAINERS & BOXES	15.54	15.97	16.34	16.65	16.84	16.94	1.74
26. PRINTING & PUBLISHING	35.57	35.89	36.33	36.77	37.07	37.35	0.98
27. CHEMICALS & PRODUCTS	35.74	36.41	36.97	37.33	37.54	37.74	1.10
28. PLASTICS & SYNTHETIC MATLS.	19.77	20.49	21.23	21.76	22.04	22.12	2.27
29. DRUGS, CLEANING & TOILET PREP.	16.03	16.14	16.39	16.60	16.60	16.66	0.77
30. PAINTS & ALLIED PRODUCTS	2.48	2.60	2.69	2.79	2.85	2.88	3.03
31. PET REFINING & REL. PROD.	13.89	13.87	13.95	14.08	14.10	14.09	0.28
32. RUBBER & MISC. PLASTICS PROD.	64.42	66.66	69.53	71.84	73.73	74.52	2.95
34. FOOTWEAR & OTHER LEATHER PROD.	9.58	9.64	9.71	9.71	9.67	9.63	0.10
35. GLASS & GLASS PRODUCTS	18.46	18.75	19.05	19.18	19.07	18.87	0.45
36. STONE & CLAY PRODUCTS	36.14	37.07	37.88	39.01	39.38	39.09	1.58

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108. OTHER CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
37. PRIMARY FERROUS METALS	88.89	91.26	93.77	94.60	94.63	93.91	1.11
38. NONFERROUS METALS	36.14	37.54	39.13	40.34	41.05	41.69	2.90
39. METAL CONTAINERS	9.37	9.24	9.26	9.42	9.48	9.53	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	60.70	60.80	62.26	64.30	65.64	66.48	1.84
41. SCREW MACHINE PROD.&STAMPINGS	33.74	35.83	37.35	38.33	38.86	39.32	3.11
42. OTHER FAB. METAL PRODUCTS	27.18	27.98	29.16	30.03	30.66	31.32	2.88
43. ENGINES & TURBINES	10.50	10.83	11.22	11.33	11.39	11.43	1.72
44. FARM & GARDEN MACHINERY	10.21	10.50	11.07	11.24	11.39	11.53	2.46
45. CONSTR. & MINING MACHINERY	17.60	18.61	19.59	20.29	20.84	21.08	3.67
46. MATERIALS HANDLING MACH. & EQ.	6.29	6.50	6.89	7.18	7.37	7.53	3.65
47. METALWORKING MACH. & EQ.	18.55	19.27	20.39	21.19	21.77	22.15	3.62
48. SPECIAL INDUSTRY MACHINERY	15.21	15.53	16.31	17.04	17.46	17.82	3.22
49. GENERAL INDUSTRY MACHINERY	23.13	23.74	24.89	25.58	26.04	26.49	2.74
50. MISC. NONELECTRICAL MACH.	11.69	12.00	12.51	12.79	12.91	13.06	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	23.21	24.24	25.38	25.93	26.39	27.08	3.13
52. SERVICE INDUSTRY MACHINES	12.33	12.82	13.43	13.65	13.68	13.69	2.10
53. ELECTRICAL MACHINERY	26.70	27.23	28.52	29.24	29.62	29.89	2.28
54. HOUSEHOLD APPLIANCES	10.20	10.45	10.71	11.05	11.26	11.39	2.24
55. ELECTRIC LIGHTING & WIRING EQ.	14.75	14.93	15.41	15.85	16.16	16.42	2.17
56. RADIO, TV, & COMMUNICATION EQ.	49.17	49.96	51.17	51.71	51.83	52.36	1.26
57. ELECTRONIC COMPONENTS & ACCESS.	41.47	43.24	45.40	47.23	48.58	49.61	3.65
58. MISC. ELECTRICAL MACH. & EQ.	14.82	15.34	15.95	16.13	16.33	16.46	2.12
59. MOTOR VEHICLES & EQUIPMENT	90.70	94.84	98.09	99.68	100.80	101.39	2.25
60. AIRCRAFT & PARTS	54.00	55.81	56.97	58.39	58.17	57.77	1.36
61. OTHER TRANSPORTATION EQ.	38.08	39.20	40.60	41.49	41.61	41.98	1.98
62. INSTRUMENTS & SUPPLIES	37.53	38.21	39.76	41.34	42.47	43.21	2.86
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	28.18	28.68	30.01	31.44	32.60	33.53	3.54
64. MISC. MANUFACTURING	30.69	31.05	31.94	32.74	33.14	33.28	1.63
65. TRANSPORTATION & WAREHOUSING	150.48	152.58	154.39	156.82	156.46	155.12	0.61
66. COMMUNICATION EXC. RADIO & TV	60.99	61.59	63.21	63.99	65.60	66.32	1.69
67. RADIO & TV BROADCASTING	0.48	0.50	0.51	0.52	0.52	0.53	1.74
68. UTILITIES	109.26	109.31	109.29	109.22	109.26	109.14	0.02
69. WHOLESALE & RETAIL TRADE	389.19	401.20	413.22	423.33	431.17	439.35	2.45
70. FINANCE & INSURANCE	4.33	4.41	4.51	4.63	4.76	4.88	2.42
71. REAL ESTATE & RENTAL	3.52	3.58	3.66	3.73	3.78	3.82	1.63
72. PERSONAL SERVICES EXC. AUTO.	62.46	63.15	64.13	65.12	66.12	66.98	1.41
73. BUSINESS SERVICES	41.05	42.02	43.14	44.51	45.62	46.44	2.50
74. EATING & DRINKING PLACES	1.41	1.43	1.46	1.47	1.48	1.48	1.05
75. AUTOMOBILE REPAIR & SERVICE	18.32	18.75	18.98	19.14	19.31	19.53	1.29

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
106. OTHER CRAFT&RELATED WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
76. AMUSEMENTS	19.95	19.89	20.12	20.28	20.46	20.60	0.65
77. MISC. SERVICES	135.13	137.77	140.78	144.80	149.33	154.32	2.69
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	143.39	146.57	150.05	153.09	155.08	156.55	1.77
82. GOVERNMENT INDUSTRY	232.92	231.13	231.82	233.74	235.75	238.83	0.50
TOTAL, ALL INDUSTRIES	3,461.70	3,538.64	3,622.48	3,695.90	3,744.03	3,779.42	1.77

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
107. AUXILIARY EQUIPMENT OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
68. UTILITIES	0.17	0.18	0.20	0.21	0.22	0.22	4.99
TOTAL, ALL INDUSTRIES	0.17	0.18	0.20	0.21	0.22	0.22	4.99
TOTAL EMPLOYMENT							
68. UTILITIES	7.93	7.86	7.79	7.72	7.65	7.58	-0.90
TOTAL, ALL INDUSTRIES	7.93	7.86	7.79	7.72	7.65	7.58	-0.90
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108. BLUE COLLAR WORKER SUPERVISORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	2.61
2. OTHER AGRICULTURAL PRODUCTS	0.03	0.03	0.03	0.03	0.03	0.03	2.77
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.77
4. AGR., FORESTRY, & FISHERY SERV.	0.07	0.08	0.08	0.09	0.10	0.10	6.86
5. IRON ORE MINING	0.15	0.17	0.18	0.20	0.21	0.21	7.79
6. NONFERROUS METAL MINING	0.22	0.25	0.28	0.31	0.34	0.37	11.12
7. COAL MINING	0.50	0.57	0.63	0.68	0.75	0.78	9.41
8. CRUDE PETROLEUM & N. GAS	0.71	0.76	0.78	0.83	0.87	0.87	4.07
9. STONE & CLAY MINING & QUARRYING	0.09	0.10	0.11	0.12	0.14	0.14	10.04
10. CHEM & FERTILIZER MIN. MINING	0.02	0.02	0.02	0.03	0.03	0.03	7.91
11. NEW CONSTRUCTION	2.16	2.46	2.67	2.96	3.21	3.39	9.38
13. ORNANCE & ACCESSORIES	4.52	5.11	5.57	6.02	6.35	6.59	7.83
14. FOOD & KINDRED PRODUCTS	0.40	0.43	0.45	0.48	0.50	0.51	5.22
16. FABRIC, YARN & THREAD MILLS	0.21	0.23	0.24	0.26	0.27	0.28	5.16
17. MISC. TEXTILE GOODS	0.06	0.06	0.07	0.07	0.08	0.08	7.28
18. APPAREL	0.10	0.11	0.11	0.12	0.13	0.13	6.14
19. MISC. FABRICATED TEXTILE PROD.	0.12	0.13	0.14	0.14	0.15	0.15	4.21
20. LUMBER & WOOD PRODUCTS	0.36	0.41	0.45	0.49	0.53	0.56	9.13
21. WOOD CONTAINERS	0.06	0.07	0.08	0.09	0.10	0.10	9.82
22. HOUSEHOLD FURNITURE	0.06	0.06	0.07	0.07	0.07	0.07	3.70
23. OTHER FURNITURE & FIXTURES	0.10	0.10	0.10	0.11	0.12	0.12	4.69
24. PAPER & ALLIED PRODUCTS	0.37	0.41	0.44	0.47	0.50	0.52	6.83
25. PAPERBOARD CONTAINERS & BOXES	0.19	0.21	0.23	0.26	0.28	0.29	8.83
26. PRINTING & PUBLISHING	0.37	0.40	0.43	0.46	0.48	0.50	6.39
27. CHEMICALS & PRODUCTS	1.15	1.26	1.35	1.47	1.57	1.64	7.44
28. PLASTICS & SYNTHETIC MATLS.	0.27	0.30	0.33	0.36	0.39	0.41	8.79
29. DRUGS, CLEANING & TOILET PREP.	0.03	0.03	0.03	0.03	0.04	0.04	4.24
30. PAINTS & ALLIED PRODUCTS	0.09	0.10	0.11	0.12	0.13	0.14	8.29
31. PET REFINING & REL. PROD.	0.41	0.44	0.46	0.49	0.52	0.53	5.37
32. RUBBER & MISC. PLASTICS PROD.	0.80	0.91	1.01	1.13	1.24	1.31	10.36
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.02	0.02	5.56
35. GLASS & GLASS PRODUCTS	0.15	0.16	0.18	0.20	0.21	0.23	9.28
36. STONE & CLAY PRODUCTS	0.49	0.55	0.59	0.65	0.69	0.72	8.23
37. PRIMARY FERROUS METALS	2.57	2.86	3.09	3.37	3.60	3.75	7.84
38. NONFERROUS METALS	1.57	1.80	1.98	2.18	2.35	2.46	9.39
39. METAL CONTAINERS	0.05	0.05	0.06	0.06	0.07	0.07	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	0.99	1.11	1.19	1.28	1.36	1.43	7.65

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108. BLUE COLLAR WORKER SUPERVISORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
41. SCREW MACHINE PROD.&STAMPINGS	0.82	0.92	1.00	1.10	1.18	1.24	8.62
42. OTHER FAB. METAL PRODUCTS	0.56	0.64	0.70	0.78	0.84	0.89	9.54
43. ENGINES & TURBINES	0.31	0.35	0.38	0.40	0.43	0.44	7.72
44. FARM & GARDEN MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	8.11
45. CONSTR. & MINING MACHINERY	0.11	0.12	0.13	0.14	0.15	0.15	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.19	0.21	0.23	0.26	0.28	0.29	9.12
47. METALWORKING MACH. & EQ.	0.46	0.53	0.58	0.64	0.69	0.72	9.36
48. SPECIAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.05	0.06	0.06	12.06
49. GENERAL INDUSTRY MACHINERY	0.41	0.46	0.50	0.53	0.57	0.59	7.51
50. MISC. NONELECTRICAL MACH.	0.71	0.78	0.85	0.94	1.00	1.03	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.28	0.32	0.35	0.37	0.39	0.40	7.32
52. SERVICE INDUSTRY MACHINES	0.11	0.13	0.14	0.16	0.18	0.21	13.37
53. ELECTRICAL MACHINERY	0.50	0.57	0.62	0.68	0.74	0.77	9.10
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	8.81
55. ELECTRIC LIGHTING & WIRING EQ.	0.25	0.28	0.30	0.33	0.36	0.37	8.25
56. RADIO, TV, & COMMUNICATION EQ.	5.89	6.77	7.44	8.06	8.49	8.67	8.05
57. ELECTRONIC COMPONENTS & ACCESS.	2.79	3.32	3.74	4.19	4.57	4.79	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.16	0.19	0.21	0.23	0.25	0.26	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.66	0.78	0.89	1.06	1.24	1.45	17.14
60. AIRCRAFT & PARTS	9.66	10.79	11.73	12.77	13.48	13.65	7.15
61. OTHER TRANSPORTATION EQ.	3.37	3.56	3.67	3.75	3.86	3.98	3.38
62. INSTRUMENTS & SUPPLIES	1.60	1.80	1.97	2.16	2.30	2.39	8.35
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.28	0.31	0.34	0.37	0.40	0.42	8.52
64. MISC. MANUFACTURING	0.09	0.10	0.10	0.11	0.12	0.12	6.08
65. TRANSPORTATION & WAREHOUSING	2.69	2.83	2.95	3.11	3.22	3.27	3.96
66. COMMUNICATION EXC. RADIO & TV	1.32	1.40	1.49	1.60	1.69	1.72	5.39
68. UTILITIES	0.76	0.83	0.89	0.96	1.00	1.02	5.87
69. WHOLESALE & RETAIL TRADE	0.90	1.02	1.13	1.25	1.36	1.44	9.74
70. FINANCE & INSURANCE	0.02	0.02	0.02	0.02	0.03	0.03	9.84
71. REAL ESTATE & RENTAL	0.04	0.04	0.05	0.05	0.06	0.06	8.46
72. PERSONAL SERVICES EXC. AUTO.	0.24	0.27	0.30	0.32	0.35	0.36	8.44
73. BUSINESS SERVICES	0.93	1.04	1.14	1.25	1.34	1.39	8.33
74. EATING & DRINKING PLACES	0.02	0.02	0.02	0.02	0.03	0.03	9.75
75. AUTOMOBILE REPAIR & SERVICE	0.17	0.18	0.20	0.22	0.23	0.24	8.06
76. AMUSEMENTS	0.02	0.02	0.02	0.03	0.03	0.03	9.16
77. MISC. SERVICES	0.20	0.20	0.21	0.23	0.24	0.25	4.75
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.24	1.34	1.42	1.50	1.55	1.58	4.93
82. GOVERNMENT INDUSTRY	2.39	2.35	2.41	2.49	2.55	2.58	1.55
TOTAL, ALL INDUSTRIES	59.70	66.41	71.81	77.90	82.69	85.54	7.46



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## TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108, BLUE COLLAR WORKER SUPERVISORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	2.81	2.84	2.79	2.74	2.72	2.70	-0.80
2. OTHER AGRICULTURAL PRODUCTS	20.37	20.45	20.54	20.47	20.43	20.40	0.03
3. FORESTRY & FISHERY PRODUCTS	0.40	0.43	0.45	0.47	0.47	0.46	2.81
4. AGR., FORESTRY, & FISHERY SERV.	3.90	4.01	4.06	4.14	4.19	4.26	1.76
5. IRON ORE MINING	2.87	3.08	3.29	3.25	3.19	3.11	1.63
6. NONFERROUS METAL MINING	3.71	3.92	4.08	4.19	4.17	4.20	2.53
7. COAL MINING	17.86	18.85	19.62	20.17	20.90	21.41	3.69
8. CRUDE PETROLEUM & N. GAS	9.68	9.65	9.62	9.42	9.28	9.34	-0.71
9. STONE & CLAY MINING & QUARRYING	2.85	2.91	3.01	3.14	3.21	3.24	2.63
10. CHEM & FERTILIZER MIN. MINING	0.95	0.97	1.01	1.03	1.04	1.05	2.01
11. NEW CONSTRUCTION	57.57	59.22	60.84	63.20	65.14	66.45	2.91
13. ORNANCE & ACCESSORIES	7.48	7.65	7.78	7.96	8.06	8.15	1.73
14. FOOD & KINDRED PRODUCTS	59.56	60.46	60.90	60.77	60.26	59.85	0.10
16. FABRIC, YARN & THREAD MILLS	17.22	17.73	18.21	18.58	18.76	18.79	1.76
17. MISC. TEXTILE GOODS	3.99	4.15	4.33	4.48	4.56	4.60	2.87
18. APPAREL	27.68	27.93	28.58	29.14	29.20	29.23	1.10
19. MISC. FABRICATED TEXTILE PROD.	4.23	4.31	4.41	4.47	4.51	4.53	1.40
20. LUMBER & WOOD PRODUCTS	17.63	19.12	19.89	20.66	20.80	20.75	3.31
21. WOOD CONTAINERS	1.07	1.06	1.08	1.11	1.12	1.13	1.17
22. HOUSEHOLD FURNITURE	10.28	10.84	11.20	11.57	11.83	11.94	3.03
23. OTHER FURNITURE & FIXTURES	6.05	6.10	6.30	6.49	6.63	6.77	2.27
24. PAPER & ALLIED PRODUCTS	19.93	20.55	20.81	20.91	20.92	20.93	0.99
25. PAPERBOARD CONTAINERS & BOXES	8.66	8.90	9.11	9.29	9.39	9.45	1.77
26. PRINTING & PUBLISHING	23.31	23.46	23.69	23.92	24.07	24.20	0.75
27. CHEMICALS & PRODUCTS	23.84	24.24	24.57	24.77	24.88	24.97	0.93
28. PLASTICS & SYNTHETIC MATLS.	11.06	11.48	11.91	12.22	12.39	12.45	2.39
29. DRUGS, CLEANING & TOILET PREP.	8.41	8.47	8.61	8.73	8.74	8.77	0.84
30. PAINTS & ALLIED PRODUCTS	1.73	1.81	1.88	1.94	1.99	2.01	3.06
31. PET REFINING & REL. PROD.	7.64	7.64	7.69	7.77	7.80	7.80	0.42
32. RUBBER & MISC. PLASTICS PROD.	29.47	30.49	31.79	32.84	33.69	34.05	2.93
34. FOOTWEAR & OTHER LEATHER PROD.	4.55	4.58	4.61	4.61	4.59	4.57	0.05
35. GLASS & GLASS PRODUCTS	6.63	6.75	6.86	6.92	6.89	6.83	0.58
36. STONE & CLAY PRODUCTS	15.03	15.32	15.57	15.94	16.00	15.79	1.00
37. PRIMARY FERROUS METALS	36.08	37.19	38.36	38.84	38.99	38.82	1.47
38. NONFERROUS METALS	18.55	19.25	20.04	20.64	20.99	21.29	2.79
39. METAL CONTAINERS	3.41	3.36	3.37	3.43	3.45	3.47	0.36

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108. BLUE COLLAR WORKER SUPERVISORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
40. FAB. STRUCTURAL METAL PRODUCTS	22.17	22.23	22.78	23.54	24.05	24.38	1.91
41. SCREW MACHINE PROO.&STAMPINGS	13.32	14.14	14.73	15.10	15.30	15.48	3.04
42. OTHER FAB. METAL PRODUCTS	12.21	12.56	13.09	13.48	13.76	14.05	2.85
43. ENGINES & TURBINES	3.68	3.80	3.94	3.98	4.01	4.02	1.78
44. FARM & GAROEN MACHINERY	4.49	4.61	4.84	4.91	4.96	5.02	2.27
45. CONSTR. & MINING MACHINERY	9.19	9.72	10.23	10.59	10.87	10.99	3.64
46. MATERIALS HANDLING MACH. & EQ.	3.29	3.39	3.60	3.74	3.85	3.93	3.62
47. METALWORKING MACH. & EQ.	8.94	9.30	9.85	10.25	10.55	10.75	3.76
48. SPECIAL INDUSTRY MACHINERY	4.77	4.87	5.12	5.35	5.48	5.59	3.22
49. GENERAL INOUSTRY MACHINERY	9.37	9.61	10.06	10.32	10.50	10.67	2.62
50. MISC. NONELECTRICAL MACH.	6.23	6.39	6.66	6.81	6.88	6.96	2.23
51. OFFICE,COMPUTING & ACCT. MACH.	7.38	7.67	7.99	8.14	8.25	8.44	2.72
52. SERVICE INOUSTRY MACHINES	6.09	6.33	6.63	6.74	6.75	6.75	2.10
53. ELECTRICAL MACHINERY	9.99	10.17	10.62	10.87	10.98	11.06	2.05
54. HOUSEHOLO APPLIANCES	3.82	3.90	3.98	4.09	4.15	4.18	1.83
55. ELECTRIC LIGHTING & WIRING EQ.	5.28	5.31	5.46	5.59	5.67	5.74	1.70
56. RADIO.TV. & COMMUNICATION EQ.	13.94	14.26	14.70	14.95	15.08	15.33	1.91
57. ELECTRONIC COMPONENTS & ACCESS.	12.75	13.30	13.96	14.53	14.94	15.26	3.65
58. MISC. ELECTRICAL MACH. & EQ.	6.06	6.27	6.52	6.60	6.68	6.73	2.12
59. MOTOR VEHICLES & EQUIPMENT	33.96	35.51	36.71	37.30	37.71	37.92	2.23
60. AIRCRAFT & PARTS	19.36	19.87	20.14	20.50	20.27	19.99	0.64
61. OTHER TRANSPORTATION EQ.	11.64	11.99	12.41	12.69	12.72	12.83	1.97
62. INSTRUMENTS & SUPPLIES	13.73	13.99	14.55	15.14	15.55	15.83	2.88
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	6.50	6.59	6.87	7.18	7.41	7.60	3.16
64. MISC. MANUFACTURING	8.17	8.30	8.57	8.82	8.96	9.03	2.04
65. TRANSPORTATION & WAREHOUSING	63.29	64.46	65.51	66.83	66.97	66.69	1.05
66. COMMUNICATION EXC. RADIO & TV	53.38	53.89	55.30	55.98	57.38	58.01	1.68
68. UTILITIES	35.52	35.52	35.50	35.46	35.45	35.39	-0.07
69. WHOLESale & RETAIL TRAOE	147.47	152.40	157.33	161.55	164.91	168.39	2.69
70. FINANCE & INSURANCE	2.02	2.06	2.11	2.18	2.24	2.31	2.73
71. REAL ESTATE & RENTAL	1.45	1.48	1.52	1.55	1.58	1.60	2.08
72. PERSONAL SERVICES EXC. AUTO.	13.22	13.44	13.71	13.99	14.28	14.53	1.90
73. BUSINESS SERVICES	19.16	19.70	20.32	21.06	21.67	22.15	2.95
74. EATING & ORINKING PLACES	1.10	1.12	1.14	1.15	1.15	1.16	1.05
75. AUTOMOBILE REPAIR & SERVICE	11.41	11.73	11.93	12.08	12.24	12.42	1.71
76. AMUSEMENTS	2.08	2.13	2.20	2.27	2.34	2.41	2.93
77. MISC. SERVICES	30.44	31.06	31.77	32.71	33.76	34.92	2.78
81. SELF-EMPLOYEO & UNPAIO FAMILY WORKERS	22.37	22.90	23.48	23.96	24.27	24.50	1.84
82. GOVERNMENT INDUSTRY	56.12	55.71	55.88	56.33	56.80	57.59	0.52

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
108. BLUE COLLAR WORKER SUPERVISORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
TOTAL, ALL INDUSTRIES	1,216.17	1,245.18	1,276.91	1,302.77	1,319.91	1,332.46	1.84

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
109. HEAVY EQUIPMENT OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.01	0.02	0.02	0.02	0.02	0.02	6.87
5. IRON ORE MINING	0.10	0.12	0.13	0.14	0.15	0.15	7.65
6. NONFERROUS METAL MINING	0.12	0.14	0.15	0.17	0.19	0.20	11.63
7. COAL MINING	0.85	0.97	1.07	1.18	1.29	1.36	9.98
8. CRUDE PETROLEUM & N. GAS	0.32	0.34	0.35	0.37	0.38	0.39	4.08
9. STONE & CLAY MINING & QUARRYING	0.37	0.41	0.45	0.51	0.55	0.59	10.00
10. CHEM & FERTILIZER MIN. MINING	0.02	0.02	0.02	0.02	0.02	0.03	7.90
11. NEW CONSTRUCTION	6.99	7.84	8.36	9.17	9.80	10.21	7.88
20. LUMBER & WOOD PRODUCTS	0.08	0.09	0.10	0.10	0.11	0.11	6.92
24. PAPER & ALLIED PRODUCTS	0.02	0.03	0.03	0.03	0.03	0.03	6.78
31. PET REFINING & REL. PROO.	0.09	0.10	0.10	0.11	0.12	0.12	4.64
36. STONE & CLAY PRODUCTS	0.23	0.27	0.29	0.32	0.35	0.36	9.37
65. TRANSPORTATION & WAREHOUSING	0.22	0.22	0.23	0.24	0.24	0.24	2.11
68. UTILITIES	0.25	0.27	0.29	0.32	0.33	0.34	6.73
69. WHOLESALE & RETAIL TRADE	0.01	0.02	0.02	0.02	0.02	0.02	9.68
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.13	1.17	1.22	1.28	1.33	1.36	3.84
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	1.54
TOTAL, ALL INDUSTRIES	10.83	12.03	12.85	14.02	14.96	15.57	7.53
TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.77	0.79	0.80	0.81	0.82	0.84	1.77
5. IRON ORE MINING	2.04	2.18	2.33	2.30	2.25	2.19	1.51
6. NONFERROUS METAL MINING	2.01	2.14	2.24	2.31	2.30	2.33	3.01
7. COAL MINING	30.21	32.09	33.60	34.72	36.14	37.18	4.23
8. CRUDE PETROLEUM & N. GAS	4.28	4.27	4.26	4.17	4.11	4.14	-0.70
9. STONE & CLAY MINING & QUARRYING	11.66	11.91	12.31	12.84	13.13	13.25	2.59
10. CHEM & FERTILIZER MIN. MINING	0.85	0.87	0.90	0.92	0.93	0.94	2.00
11. NEW CONSTRUCTION	185.94	188.39	190.80	195.48	198.87	200.34	1.50
20. LUMBER & WOOD PRODUCTS	3.94	4.19	4.26	4.34	4.30	4.18	1.21
24. PAPER & ALLIED PRODUCTS	1.29	1.33	1.34	1.35	1.35	1.35	0.94
31. PET REFINING & REL. PROO.	1.76	1.75	1.75	1.75	1.75	1.73	-0.27
36. STONE & CLAY PRODUCTS	7.22	7.44	7.64	7.90	8.02	7.99	2.06
65. TRANSPORTATION & WAREHOUSING	5.07	5.08	5.07	5.08	5.00	4.89	-0.74
68. UTILITIES	11.48	11.58	11.67	11.75	11.84	11.92	0.75
69. WHOLESALE & RETAIL TRADE	2.19	2.27	2.34	2.40	2.45	2.50	2.63
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	27.22	27.62	28.03	28.61	29.05	29.32	1.50

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
109. HEAVY EQUIPMENT OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
82. GOVERNMENT INDUSTRY	65.50	64.89	64.97	65.33	65.71	66.56	0.32
TOTAL, ALL INDUSTRIES	365.83	371.19	376.73	384.48	390.43	394.05	1.50

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
110. INSPECTORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.01	0.01	0.01	0.01	0.01	0.01	9.94
8. CRUDE PETROLEUM & N. GAS	0.02	0.02	0.02	0.02	0.02	0.02	4.35
11. NEW CONSTRUCTION	0.09	0.10	0.11	0.12	0.13	0.14	8.55
13. ORDNANCE & ACCESSORIES	4.62	5.22	5.68	6.14	6.46	6.70	7.71
14. FOOD & KINDRED PRODUCTS	0.09	0.10	0.10	0.11	0.11	0.12	5.62
16. FABRIC, YARN & THREAD MILLS	0.11	0.12	0.13	0.13	0.14	0.14	4.43
17. MISC. TEXTILE GOODS	0.06	0.07	0.07	0.08	0.08	0.09	7.47
18. APPAREL	0.13	0.14	0.15	0.16	0.17	0.18	6.76
19. MISC. FABRICATED TEXTILE PROD.	0.12	0.13	0.14	0.14	0.15	0.15	4.28
20. LUMBER & WOOD PRODUCTS	0.05	0.06	0.06	0.07	0.08	0.08	10.15
21. WOOD CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	9.82
22. HOUSEHOLD FURNITURE	0.02	0.03	0.03	0.03	0.03	0.03	3.70
23. OTHER FURNITURE & FIXTURES	0.03	0.03	0.03	0.03	0.03	0.04	4.58
24. PAPER & ALLIED PRODUCTS	0.08	0.09	0.10	0.11	0.11	0.12	7.00
25. PAPERBOARD CONTAINERS & BOXES	0.04	0.04	0.05	0.05	0.06	0.06	8.78
26. PRINTING & PUBLISHING	0.07	0.08	0.08	0.09	0.09	0.09	5.78
27. CHEMICALS & PRODUCTS	0.07	0.08	0.08	0.09	0.10	0.10	7.80
28. PLASTICS & SYNTHETIC MATLS.	0.08	0.09	0.10	0.11	0.12	0.12	8.70
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.02	0.02	0.02	0.02	0.02	4.21
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.14
31. PET REFINING & REL. PROD.	0.02	0.02	0.02	0.02	0.02	0.02	4.97
32. RUBBER & MISC. PLASTICS PROD.	0.59	0.67	0.74	0.83	0.91	0.96	10.28
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.01	0.01	6.07
35. GLASS & GLASS PRODUCTS	0.12	0.14	0.15	0.17	0.18	0.19	9.45
36. STONE & CLAY PRODUCTS	0.15	0.17	0.18	0.20	0.21	0.22	8.46
37. PRIMARY FERROUS METALS	0.85	0.94	1.02	1.12	1.19	1.25	8.10
38. NONFERROUS METALS	0.64	0.73	0.79	0.87	0.93	0.97	8.78
39. METAL CONTAINERS	0.06	0.06	0.06	0.07	0.07	0.08	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	0.45	0.51	0.54	0.59	0.62	0.66	8.01
41. SCREW MACHINE PROD. & STAMPINGS	0.63	0.72	0.78	0.86	0.93	0.97	8.95
42. OTHER FAB. METAL PRODUCTS	0.35	0.40	0.44	0.48	0.52	0.55	9.52
43. ENGINES & TURBINES	0.27	0.31	0.33	0.36	0.38	0.39	7.72
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.11
45. CONSTR. & MINING MACHINERY	0.05	0.06	0.06	0.07	0.07	0.08	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.09	0.11	0.11	0.13	0.14	0.14	9.12
47. METALWORKING MACH. & EQ.	0.26	0.30	0.33	0.37	0.39	0.41	9.36
48. SPECIAL INDUSTRY MACHINERY	0.02	0.03	0.03	0.04	0.04	0.04	12.06

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
110. INSPECTORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
49. GENERAL INDUSTRY MACHINERY	0.33	0.37	0.40	0.43	0.46	0.47	7.51
50. MISC. NONELECTRICAL MACH.	0.56	0.61	0.67	0.74	0.78	0.81	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.45	0.51	0.55	0.59	0.62	0.63	7.33
52. SERVICE INDUSTRY MACHINES	0.08	0.09	0.10	0.11	0.13	0.14	13.37
53. ELECTRICAL MACHINERY	0.39	0.45	0.49	0.54	0.58	0.61	9.12
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.02	0.02	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.31	0.35	0.38	0.41	0.44	0.46	8.25
56. RADIO, TV, & COMMUNICATION EQ.	7.86	8.88	9.58	10.21	10.57	10.62	6.21
57. ELECTRONIC COMPONENTS & ACCESS.	3.87	4.61	5.19	5.80	6.33	6.63	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.20	0.23	0.25	0.27	0.30	0.31	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.83	0.99	1.13	1.34	1.57	1.84	17.14
60. AIRCRAFT & PARTS	11.68	13.16	14.45	15.89	16.93	17.32	8.20
61. OTHER TRANSPORTATION EQ.	0.94	0.99	1.02	1.04	1.07	1.10	3.30
62. INSTRUMENTS & SUPPLIES	1.51	1.70	1.86	2.04	2.18	2.25	8.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.23	0.25	0.27	0.30	0.33	0.35	8.93
64. MISC. MANUFACTURING	0.06	0.07	0.07	0.08	0.08	0.09	7.60
65. TRANSPORTATION & WAREHOUSING	0.14	0.15	0.15	0.16	0.16	0.16	2.42
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.01	0.01	0.01	5.48
68. UTILITIES	0.12	0.13	0.14	0.15	0.16	0.16	5.89
72. PERSONAL SERVICES EXC. AUTO.	0.17	0.18	0.19	0.21	0.22	0.22	5.70
73. BUSINESS SERVICES	0.43	0.47	0.51	0.55	0.58	0.60	6.88
76. AMUSEMENTS	0.01	0.01	0.01	0.01	0.01	0.02	7.24
77. MISC. SERVICES	0.03	0.03	0.03	0.03	0.03	0.03	4.31
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.05	0.05	0.05	0.06	0.06	4.95
82. GOVERNMENT INDUSTRY	0.14	0.14	0.14	0.14	0.14	0.14	0.86
TOTAL, ALL INDUSTRIES	40.71	46.05	50.29	54.87	58.36	60.29	8.17
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.12	0.12	0.13	0.13	0.13	0.13	1.44
8. CRUDE PETROLEUM & N. GAS	0.24	0.24	0.24	0.23	0.23	0.23	-0.44
11. NEW CONSTRUCTION	2.42	2.47	2.51	2.59	2.65	2.69	2.13
13. ORDNANCE & ACCESSORIES	7.65	7.81	7.94	8.11	8.21	8.29	1.61
14. FOOD & KINDRED PRODUCTS	13.31	13.56	13.72	13.74	13.67	13.63	0.48
16. FABRIC, YARN & THREAD MILLS	9.14	9.35	9.53	9.66	9.68	9.63	1.05
17. MISC. TEXTILE GOODS	4.14	4.31	4.50	4.67	4.76	4.81	3.06
18. APPAREL	36.17	36.72	37.81	38.78	39.07	39.34	1.69
19. MISC. FABRICATED TEXTILE PROD.	4.20	4.29	4.39	4.46	4.49	4.52	1.47
20. LUMBER & WOOD PRODUCTS	2.45	2.68	2.82	2.95	3.02	3.02	4.27

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
110. INSPECTORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
21. WOOD CONTAINERS	0.10	0.10	0.11	0.11	0.11	0.11	1.16
22. HOUSEHOLD FURNITURE	4.06	4.28	4.42	4.57	4.67	4.71	3.03
23. OTHER FURNITURE & FIXTURES	1.79	1.81	1.86	1.92	1.96	2.00	2.16
24. PAPER & ALLIED PRODUCTS	4.46	4.61	4.68	4.71	4.72	4.72	1.14
25. PAPERBOARD CONTAINERS & BOXES	1.81	1.86	1.90	1.94	1.96	1.97	1.71
26. PRINTING & PUBLISHING	4.46	4.46	4.48	4.50	4.50	4.50	0.18
27. CHEMICALS & PRODUCTS	1.46	1.49	1.51	1.53	1.54	1.55	1.27
28. PLASTICS & SYNTHETIC MATLS.	3.31	3.44	3.56	3.65	3.70	3.71	2.31
29. DRUGS, CLEANING & TOILET PREP.	4.09	4.12	4.19	4.24	4.25	4.26	0.80
30. PAINTS & ALLIED PRODUCTS	0.17	0.17	0.18	0.19	0.19	0.19	2.91
31. PET REFINING & REL. PROD.	0.36	0.36	0.36	0.36	0.36	0.36	0.05
32. RUBBER & MISC. PLASTICS PROD.	21.71	22.45	23.39	24.14	24.75	25.00	2.86
34. FOOTWEAR & OTHER LEATHER PROD.	2.40	2.43	2.46	2.47	2.47	2.47	0.53
35. GLASS & GLASS PRODUCTS	5.55	5.66	5.77	5.82	5.80	5.76	0.73
36. STONE & CLAY PRODUCTS	4.51	4.61	4.70	4.82	4.85	4.79	1.21
37. PRIMARY FERROUS METALS	11.86	12.26	12.67	12.86	12.94	12.91	1.72
38. NONFERROUS METALS	7.53	7.77	8.05	8.24	8.33	8.41	2.23
39. METAL CONTAINERS	3.86	3.80	3.81	3.88	3.90	3.92	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	10.06	10.13	10.41	10.80	11.07	11.25	2.26
41. SCREW MACHINE PROD.&STAMPINGS	10.33	11.00	11.50	11.83	12.02	12.18	3.35
42. OTHER FAB. METAL PRODUCTS	7.61	7.83	8.16	8.40	8.57	8.75	2.83
43. ENGINES & TURBINES	3.25	3.35	3.47	3.51	3.53	3.54	1.78
44. FARM & GARDEN MACHINERY	2.37	2.43	2.56	2.59	2.62	2.65	2.27
45. CONSTR. & MINING MACHINERY	4.51	4.77	5.02	5.20	5.34	5.40	3.64
46. MATERIALS HANDLING MACH. & EQ.	1.61	1.67	1.77	1.84	1.89	1.93	3.62
47. METALWORKING MACH. & EQ.	5.10	5.31	5.63	5.86	6.03	6.14	3.76
48. SPECIAL INDUSTRY MACHINERY	3.33	3.40	3.56	3.72	3.82	3.90	3.21
49. GENERAL INDUSTRY MACHINERY	7.53	7.72	8.08	8.30	8.44	8.57	2.62
50. MISC. NONELECTRICAL MACH.	4.91	5.03	5.25	5.37	5.41	5.48	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	11.82	12.29	12.81	13.04	13.23	13.53	2.74
52. SERVICE INDUSTRY MACHINES	4.21	4.37	4.58	4.66	4.67	4.67	2.10
53. ELECTRICAL MACHINERY	7.86	8.00	8.36	8.55	8.64	8.71	2.06
54. HOUSEHOLD APPLIANCES	4.27	4.38	4.50	4.66	4.76	4.82	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	6.53	6.58	6.75	6.91	7.02	7.11	1.70
56. RADIO, TV, & COMMUNICATION EQ.	18.61	18.70	18.95	18.94	18.78	18.77	0.17
57. ELECTRONIC COMPONENTS & ACCESS.	17.67	18.43	19.35	20.13	20.70	21.14	3.65
58. MISC. ELECTRICAL MACH. & EQ.	7.27	7.52	7.82	7.91	8.01	8.08	2.12
59. MOTOR VEHICLES & EQUIPMENT	43.07	45.02	46.55	47.30	47.82	48.09	2.23
60. AIRCRAFT & PARTS	23.39	24.24	24.81	25.50	25.47	25.36	1.63



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
110. INSPECTORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
61. OTHER TRANSPORTATION EQ.	3.24	3.33	3.45	3.52	3.52	3.55	1.88
62. INSTRUMENTS & SUPPLIES	12.98	13.22	13.75	14.30	14.69	14.95	2.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	5.23	5.32	5.57	5.83	6.05	6.22	3.55
64. MISC. MANUFACTURING	5.48	5.68	5.93	6.19	6.38	6.51	3.51
65. TRANSPORTATION & WAREHOUSING	3.32	3.33	3.34	3.36	3.31	3.25	-0.44
66. COMMUNICATION EXC. RADIO & TV	0.44	0.45	0.46	0.47	0.48	0.48	1.76
68. UTILITIES	5.70	5.70	5.69	5.69	5.69	5.68	-0.05
72. PERSONAL SERVICES EXC. AUTO.	9.13	9.04	8.99	8.95	8.90	8.83	0.67
73. BUSINESS SERVICES	8.80	8.92	9.08	9.28	9.43	9.52	1.58
76. AMUSEMENTS	1.13	1.13	1.15	1.16	1.18	1.19	1.13
77. MISC. SERVICES	3.92	3.98	4.05	4.15	4.27	4.40	2.35
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.47	0.48	0.49	0.50	0.51	0.51	1.98
82. GOVERNMENT INDUSTRY	3.74	3.76	3.82	3.92	4.01	4.08	1.72
TOTAL, ALL INDUSTRIES	435.49	447.02	460.66	470.93	476.53	480.27	1.98

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
111. LENS GRINDERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG ANN
							% GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
35. GLASS & GLASS PRODUCTS	0 01	0 01	0 01	0 01	0 01	0 01	7 65
56. RADIO, TV, & COMMUNICATION EQ.	0 04	0 05	0 05	0 06	0 06	0 06	8 33
62. INSTRUMENTS & SUPPLIES	0 02	0 02	0 02	0 03	0 03	0 03	8 12
83. OPTICAL, OPHTHALMIC & PHOTO EQ.	0 29	0 32	0 36	0 40	0 44	0 47	10 23
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0 15	0 16	0 18	0 19	0 20	0 21	7 22
TOTAL, ALL INDUSTRIES	0 50	0 57	0 62	0 69	0 74	0 78	9 11
TOTAL EMPLOYMENT							
35. GLASS & GLASS PRODUCTS	0 33	0 33	0 33	0 32	0 32	0 31	0 92
56. RADIO, TV, & COMMUNICATION EQ.	0 10	0 10	0 10	0 11	0 11	0 11	2 17
62. INSTRUMENTS & SUPPLIES	0 17	0 17	0 18	0 18	0 19	0 19	2 66
83. OPTICAL, OPHTHALMIC & PHOTO EQ.	6 67	6 87	7 28	7 72	8 10	8 42	4 78
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2 57	2 65	2 80	2 95	3 09	3 20	4 47
TOTAL, ALL INDUSTRIES	9 84	10 13	10 70	11 30	11 81	12 24	4 47

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
112. MACHINE SETTERS, PLASTIC MATL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
32. RUBBER & MISC. PLASTICS PROD.	0.17	0.19	0.21	0.24	0.26	0.27	9.87
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.01
82. GOVERNMENT INDUSTRY	0.19	0.19	0.19	0.19	0.19	0.19	-0.33
TOTAL, ALL INDUSTRIES	0.37	0.39	0.41	0.44	0.46	0.48	4.99
TOTAL EMPLOYMENT							
32. RUBBER & MISC. PLASTICS PROD.	6.29	6.48	6.72	6.92	7.07	7.11	2.47
64. MISC. MANUFACTURING	0.72	0.74	0.76	0.78	0.79	0.80	1.97
82. GOVERNMENT INDUSTRY	-0.17	-0.17	-0.17	-0.17	-0.17	-0.17	--
TOTAL, ALL INDUSTRIES	6.87	7.08	7.34	7.56	7.72	7.77	2.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
113. PATTERNMAKERS, WOOD  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.05	0.06	0.06	0.07	0.07	0.08	9.00
37. PRIMARY FERROUS METALS	0.10	0.10	0.11	0.12	0.13	0.13	6.14
38. NONFERROUS METALS	0.03	0.03	0.03	0.03	0.04	0.04	8.71
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.52
41. SCREW MACHINE PROO.&STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.02	7.67
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.74
47. METALWORKING MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.37
49. GENERAL INDUSTRY MACHINERY	0.08	0.09	0.10	0.10	0.11	0.11	7.51
56. RADIO, TV, & COMMUNICATION EQ.	0.01	0.02	0.02	0.02	0.02	0.02	7.61
60. AIRCRAFT & PARTS	0.12	0.14	0.15	0.17	0.18	0.19	8.61
61. OTHER TRANSPORTATION EQ.	0.03	0.04	0.04	0.04	0.04	0.04	3.10
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.05	0.05	0.05	0.05	5.11
82. GOVERNMENT INDUSTRY	0.03	0.03	0.03	0.03	0.03	0.03	0.82
TOTAL, ALL INDUSTRIES	0.56	0.62	0.67	0.73	0.77	0.80	7.27
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.08	0.08	0.09	0.09	0.09	0.09	2.84
37. PRIMARY FERROUS METALS	1.34	1.36	1.38	1.37	1.36	1.33	-0.13
38. NONFERROUS METALS	0.30	0.31	0.32	0.33	0.33	0.34	2.15
40. FAB. STRUCTURAL METAL PRODUCTS	0.13	0.13	0.13	0.14	0.14	0.15	2.73
41. SCREW MACHINE PROO.&STAMPINGS	0.17	0.18	0.19	0.19	0.19	0.19	2.15
43. ENGINES & TURBINES	0.07	0.07	0.07	0.08	0.08	0.08	1.80
47. METALWORKING MACH. & EQ.	0.50	0.52	0.55	0.57	0.59	0.60	3.77
49. GENERAL INDUSTRY MACHINERY	1.82	1.86	1.95	2.00	2.03	2.07	2.62
56. RADIO, TV, & COMMUNICATION EQ.	0.03	0.03	0.04	0.04	0.04	0.04	1.49
60. AIRCRAFT & PARTS	0.25	0.26	0.26	0.27	0.27	0.27	2.02
61. OTHER TRANSPORTATION EQ.	0.12	0.12	0.13	0.13	0.13	0.13	1.69
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.41	0.42	0.43	0.44	0.45	0.45	1.98
82. GOVERNMENT INDUSTRY	0.17	0.17	0.17	0.17	0.17	0.17	0.06
TOTAL, ALL INDUSTRIES	6.24	6.40	6.63	6.76	6.83	6.88	1.98

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
114. PATTERNMAKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
32. RUBBER & MISC. PLASTICS PROD.	0.02	0.02	0.02	0.02	0.03	0.03	10.76
36. STONE & CLAY PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	9.12
82. GOVERNMENT INDUSTRY	0.12	0.12	0.12	0.12	0.12	0.12	-0.33
TOTAL, ALL INDUSTRIES	0.17	0.18	0.18	0.19	0.19	0.19	2.38
TOTAL EMPLOYMENT							
32. RUBBER & MISC. PLASTICS PROD.	0.60	0.63	0.66	0.63	0.70	0.71	3.30
36. STONE & CLAY PRODUCTS	0.64	0.66	0.68	0.70	0.71	0.70	1.83
82. GOVERNMENT INDUSTRY	0.00	0.00	0.00	0.00	0.00	0.00	--
TOTAL, ALL INDUSTRIES	1.35	1.40	1.44	1.49	1.52	1.53	2.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
115. SHIPFITTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
61. OTHER TRANSPORTATION EQ.	3.52	3.72	3.84	3.92	4.05	4.17	3.44
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.03	1.86
82. GOVERNMENT INDUSTRY	2.87	2.81	2.86	2.94	2.98	3.00	0.85
TOTAL, ALL INDUSTRIES	6.42	6.55	6.73	6.88	7.05	7.20	2.31
TOTAL EMPLOYMENT							
61. OTHER TRANSPORTATION EQ.	12.16	12.53	12.98	13.27	13.32	13.44	2.02
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.06	0.06	0.06	0.06	0.06	0.06	1.81
82. GOVERNMENT INDUSTRY	4.80	4.79	4.85	4.94	5.04	5.11	1.27
TOTAL, ALL INDUSTRIES	17.02	17.39	17.90	18.29	18.43	18.62	1.81
-----							

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
116. SHIP ENGINEERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.01	0.01	0.01	0.02	0.02	0.02	4.85
11. NEW CONSTRUCTION	0.01	0.01	0.01	0.02	0.02	0.02	8.39
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	3.46
65. TRANSPORTATION & WAREHOUSING	0.31	0.32	0.34	0.35	0.36	0.37	3.52
TOTAL, ALL INDUSTRIES	0.35	0.37	0.39	0.41	0.42	0.42	3.80
TOTAL EMPLOYMENT							
8. CRUDE PETROLEUM & N. GAS	0.17	0.17	0.18	0.17	0.17	0.17	0.04
11. NEW CONSTRUCTION	0.32	0.33	0.33	0.34	0.35	0.35	1.98
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.06	0.06	0.06	0.06	2.04
65. TRANSPORTATION & WAREHOUSING	7.26	7.36	7.45	7.57	7.55	7.49	0.62
TOTAL, ALL INDUSTRIES	8.87	8.97	9.08	9.21	9.21	9.17	0.67

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
117. TESTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.64	0.72	0.79	0.85	0.90	0.94	7.96
14. FOOD & KINDRED PRODUCTS	0.06	0.06	0.06	0.07	0.07	0.07	5.05
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.03	0.03	0.04	0.04	5.92
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.02	0.02	7.12
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	11.26
24. PAPER & ALLIED PRODUCTS	0.11	0.12	0.13	0.13	0.14	0.15	6.31
27. CHEMICALS & PRODUCTS	0.09	0.10	0.11	0.11	0.12	0.13	7.75
28. PLASTICS & SYNTHETIC MATLS.	0.06	0.07	0.08	0.09	0.09	0.10	8.70
30. PAINTS & ALLIED PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	8.20
31. PET REFINING & REL. PROD.	0.09	0.09	0.10	0.11	0.11	0.11	5.24
32. RUBBER & MISC. PLASTICS PROD.	0.05	0.05	0.06	0.07	0.07	0.08	10.19
35. GLASS & GLASS PRODUCTS	0.03	0.04	0.04	0.04	0.05	0.05	7.99
36. STONE & CLAY PRODUCTS	0.05	0.06	0.06	0.07	0.07	0.07	7.58
37. PRIMARY FERROUS METALS	0.17	0.19	0.20	0.22	0.23	0.24	7.96
38. NONFERROUS METALS	0.13	0.15	0.16	0.18	0.19	0.20	9.54
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.10	0.11	0.12	0.13	0.14	0.15	8.24
41. SCREW MACHINE PROD. & STAMPINGS	0.06	0.07	0.07	0.08	0.08	0.08	7.71
42. OTHER FAB. METAL PRODUCTS	0.09	0.11	0.12	0.13	0.14	0.15	9.87
43. ENGINES & TURBINES	0.10	0.11	0.12	0.13	0.13	0.14	7.72
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.02	0.02	0.03	9.12
47. METALWORKING MACH. & EQ.	0.04	0.05	0.06	0.06	0.07	0.07	9.37
49. GENERAL INDUSTRY MACHINERY	0.06	0.07	0.07	0.08	0.08	0.09	7.51
50. MISC. NONELECTRICAL MACH.	0.05	0.05	0.05	0.06	0.06	0.07	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.06	0.07	0.08	0.08	0.09	0.09	7.31
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.02	0.03	0.03	0.03	13.36
53. ELECTRICAL MACHINERY	0.23	0.26	0.28	0.31	0.34	0.35	8.96
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.03	0.03	0.04	0.04	8.26
56. RADIO, TV, & COMMUNICATION EQ.	4.11	4.73	5.20	5.63	5.93	6.06	8.04
57. ELECTRONIC COMPONENTS & ACCESS.	1.90	2.26	2.55	2.85	3.11	3.26	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.02	0.02	0.03	0.03	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.11	0.13	0.15	0.17	0.20	0.24	17.14
60. AIRCRAFT & PARTS	1.46	1.65	1.82	2.00	2.14	2.20	8.59
61. OTHER TRANSPORTATION EQ.	0.16	0.17	0.18	0.18	0.18	0.19	2.86
62. INSTRUMENTS & SUPPLIES	0.69	0.78	0.85	0.93	0.99	1.02	8.14
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.07	0.08	0.09	0.10	0.10	0.11	8.56



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
117. TESTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.29
73. BUSINESS SERVICES	0.02	0.02	0.02	0.02	0.02	0.03	7.71
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.01	0.01	0.01	5.21
82. GOVERNMENT INDUSTRY	0.32	0.32	0.32	0.33	0.34	0.34	0.85
TOTAL, ALL INDUSTRIES	11.31	12.89	14.16	15.47	16.49	17.05	8.57
TOTAL EMPLOYMENT							
13. ORNANCE & ACCESSORIES	1.06	1.08	1.10	1.13	1.14	1.16	1.85
14. FOOD & KINDRED PRODUCTS	8.44	8.56	8.61	8.57	8.49	8.42	-0.07
16. FABRIC, YARN & THREAD MILLS	2.30	2.39	2.47	2.54	2.58	2.60	2.50
17. MISC. TEXTILE GOODS	0.77	0.80	0.83	0.86	0.88	0.88	2.73
20. LUMBER & WOOD PRODUCTS	0.40	0.44	0.47	0.50	0.51	0.52	5.32
24. PAPER & ALLIED PRODUCTS	5.74	5.89	5.93	5.93	5.91	5.88	0.50
27. CHEMICALS & PRODUCTS	1.84	1.88	1.91	1.93	1.94	1.96	1.22
28. PLASTICS & SYNTHETIC MATLS.	2.62	2.72	2.82	2.89	2.93	2.94	2.31
30. PAINTS & ALLIED PRODUCTS	0.30	0.32	0.33	0.34	0.35	0.35	2.97
31. PET REFINING & REL. PROO.	1.64	1.64	1.65	1.66	1.66	1.66	0.30
32. RUBBER & MISC. PLASTICS PROO.	1.71	1.76	1.83	1.88	1.94	1.96	2.77
35. GLASS & GLASS PRODUCTS	1.48	1.49	1.50	1.49	1.47	1.44	-0.61
36. STONE & CLAY PRODUCTS	1.58	1.60	1.62	1.65	1.64	1.61	0.39
37. PRIMARY FERROUS METALS	2.34	2.42	2.49	2.53	2.54	2.53	1.58
38. NONFERROUS METALS	1.53	1.59	1.66	1.71	1.74	1.77	2.93
39. METAL CONTAINERS	0.82	0.80	0.81	0.82	0.83	0.83	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	2.19	2.21	2.28	2.37	2.43	2.47	2.47
41. SCREW MACHINE PROO. & STAMPINGS	0.95	1.00	1.03	1.05	1.06	1.06	2.18
42. OTHER FAB. METAL PRODUCTS	2.01	2.07	2.17	2.24	2.29	2.35	3.16
43. ENGINES & TURBINES	1.14	1.18	1.22	1.24	1.24	1.25	1.78
45. CONSTR. & MINING MACHINERY	0.80	0.84	0.89	0.92	0.94	0.95	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.29	0.29	0.31	0.32	0.33	0.34	3.62
47. METALWORKING MACH. & EQ.	0.85	0.89	0.94	0.98	1.00	1.02	3.77
49. GENERAL INDUSTRY MACHINERY	1.36	1.40	1.46	1.50	1.53	1.55	2.62
50. MISC. NONELECTRICAL MACH.	0.40	0.41	0.43	0.44	0.44	0.44	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	1.66	1.73	1.80	1.83	1.86	1.90	2.72
52. SERVICE INDUSTRY MACHINES	0.98	1.02	1.07	1.09	1.09	1.09	2.10
53. ELECTRICAL MACHINERY	4.58	4.65	4.85	4.96	5.00	5.03	1.92
55. ELECTRIC LIGHTING & WIRING EQ.	0.53	0.53	0.55	0.56	0.57	0.57	1.71
56. RADIO, TV, & COMMUNICATION EQ.	9.74	9.97	10.27	10.44	10.53	10.70	1.90
57. ELECTRONIC COMPONENTS & ACCESS.	8.68	9.05	9.51	9.89	10.17	10.39	3.65

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
117. TESTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	B2	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
58. MISC. ELECTRICAL MACH. & EQ.	0.65	0.68	0.70	0.71	0.72	0.72	2.12
59. MOTOR VEHICLES & EQUIPMENT	5.60	5.85	6.05	6.15	6.21	6.25	2.23
60. AIRCRAFT & PARTS	2.92	3.04	3.12	3.22	3.23	3.22	2.00
61. OTHER TRANSPORTATION EQ.	0.58	0.58	0.59	0.60	0.60	0.60	1.45
62. INSTRUMENTS & SUPPLIES	5.93	6.03	6.27	6.50	6.67	6.78	2.69
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.67	1.69	1.77	1.84	1.91	1.95	3.19
64. MISC. MANUFACTURING	0.54	0.55	0.57	0.59	0.60	0.60	2.24
73. BUSINESS SERVICES	0.36	0.37	0.38	0.39	0.40	0.41	2.36
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.09	0.10	0.10	0.10	0.10	0.10	1.95
82. GOVERNMENT INDUSTRY	0.62	0.62	0.63	0.64	0.65	0.66	1.02
TOTAL, ALL INDUSTRIES	94.71	97.21	100.17	102.31	103.48	104.32	1.95

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
118. CRAFT&RELATED WORKERS. NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.04	0.04	0.04	0.04	0.04	0.04	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.07	0.07	0.07	0.07	0.07	0.08	2.47
3. FORESTRY & FISHERY PRODUCTS	0.02	0.02	0.02	0.02	0.03	0.03	5.88
4. AGR., FORESTRY, & FISHERY SERV.	0.05	0.05	0.05	0.06	0.06	0.07	6.86
5. IRON ORE MINING	0.06	0.07	0.08	0.08	0.09	0.09	7.67
6. NONFERROUS METAL MINING	0.19	0.22	0.25	0.27	0.30	0.32	10.71
7. COAL MINING	0.21	0.24	0.26	0.29	0.31	0.33	9.22
8. CRUDE PETROLEUM & N. GAS	1.32	1.41	1.46	1.54	1.62	1.64	4.41
9. STONE&CLAY MINING & QUARRYING	0.07	0.08	0.09	0.10	0.11	0.12	9.51
10. CHEM&FERTILIZER MIN. MINING	0.02	0.03	0.03	0.03	0.03	0.03	7.91
11. NEW CONSTRUCTION	2.44	2.77	3.00	3.34	3.61	3.81	9.35
13. ORNANCE & ACCESSORIES	1.51	1.71	1.86	2.01	2.12	2.20	7.79
14. FOOD & KINDRED PRODUCTS	0.14	0.16	0.16	0.17	0.18	0.18	4.89
16. FABRIC, YARN & THREAD MILLS	0.03	0.03	0.04	0.04	0.04	0.04	4.59
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	6.64
18. APPAREL	0.05	0.06	0.06	0.06	0.07	0.07	6.11
19. MISC. FABRICATED TEXTILE PROD.	0.05	0.05	0.05	0.06	0.06	0.06	4.67
20. LUMBER & WOOD PRODUCTS	0.89	0.99	1.06	1.15	1.24	1.30	8.00
21. WOOD CONTAINERS	0.06	0.07	0.08	0.08	0.09	0.10	9.82
22. HOUSEHOLD FURNITURE	0.27	0.29	0.31	0.32	0.33	0.32	3.70
23. OTHER FURNITURE & FIXTURES	0.23	0.24	0.25	0.27	0.28	0.29	4.79
24. PAPER & ALLIED PRODUCTS	0.30	0.33	0.35	0.38	0.39	0.40	6.01
25. PAPERBOARD CONTAINERS & BOXES	0.11	0.12	0.13	0.15	0.16	0.16	8.78
26. PRINTING & PUBLISHING	0.12	0.13	0.14	0.16	0.17	0.17	7.88
27. CHEMICALS & PRODUCTS	0.41	0.46	0.49	0.54	0.58	0.61	8.03
28. PLASTICS & SYNTHETIC MATS.	0.07	0.07	0.08	0.09	0.09	0.10	8.06
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.01	3.90
30. PAINTS & ALLIED PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	8.23
31. PET REFINING & REL. PROD.	0.13	0.14	0.15	0.16	0.17	0.17	5.18
32. RUBBER & MISC. PLASTICS PROD.	0.13	0.14	0.16	0.19	0.21	0.22	11.71
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.01	0.01	5.28
35. GLASS & GLASS PRODUCTS	0.10	0.11	0.12	0.13	0.14	0.15	9.01
36. STONE & CLAY PRODUCTS	0.23	0.27	0.29	0.32	0.35	0.37	10.08
37. PRIMARY FERROUS METALS	2.66	2.93	3.13	3.39	3.58	3.70	6.87
38. NONFERROUS METALS	0.70	0.81	0.89	0.99	1.08	1.14	10.39
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.02	0.03	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	1.17	1.31	1.39	1.49	1.58	1.66	7.26

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
118. CRAFT&RELATED WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROD.&STAMPINGS	0.55	0.62	0.67	0.74	0.79	0.83	8.61
42. OTHER FAB. METAL PRODUCTS	0.24	0.28	0.30	0.33	0.36	0.38	9.59
43. ENGINES & TURBINES	0.20	0.22	0.24	0.26	0.27	0.28	7.42
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	8.75
45. CONSTR. & MINING MACHINERY	0.04	0.04	0.04	0.05	0.05	0.05	7.40
46. MATERIALS HANDLING MACH. & EQ.	0.06	0.07	0.08	0.08	0.09	0.09	9.28
47. METALWORKING MACH. & EQ.	0.16	0.19	0.20	0.22	0.24	0.24	8.46
48. SPECIAL INDUSTRY MACHINERY	0.05	0.06	0.06	0.07	0.08	0.09	12.06
49. GENERAL INDUSTRY MACHINERY	0.13	0.15	0.16	0.18	0.19	0.20	8.49
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.02	0.02	0.02	7.58
51. OFFICE, COMPUTING & ACCT. MACH.	0.09	0.11	0.12	0.13	0.14	0.15	11.25
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.02	0.03	0.03	0.03	13.35
53. ELECTRICAL MACHINERY	0.21	0.25	0.27	0.31	0.33	0.35	10.75
55. ELECTRIC LIGHTING & WIRING EQ.	0.11	0.13	0.15	0.16	0.18	0.19	11.22
56. RADIO, TV, & COMMUNICATION EQ.	2.85	3.27	3.60	3.90	4.10	4.20	8.07
57. ELECTRONIC COMPONENTS & ACCESS.	0.51	0.61	0.69	0.77	0.84	0.88	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.03	0.03	0.03	0.03	0.04	9.56
59. MOTOR VEHICLES & EQUIPMENT	0.15	0.18	0.21	0.25	0.29	0.34	17.46
60. AIRCRAFT & PARTS	4.03	4.56	5.03	5.55	5.93	6.09	8.59
61. OTHER TRANSPORTATION EQ.	2.98	3.15	3.25	3.32	3.42	3.53	3.41
62. INSTRUMENTS & SUPPLIES	0.55	0.62	0.68	0.74	0.79	0.82	8.46
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.35	0.39	0.42	0.46	0.50	0.52	8.20
64. MISC. MANUFACTURING	0.17	0.19	0.20	0.21	0.22	0.22	4.67
65. TRANSPORTATION & WAREHOUSING	3.04	3.18	3.28	3.45	3.54	3.57	3.24
66. COMMUNICATION EXC. RADIO & TV	0.18	0.19	0.20	0.22	0.23	0.23	5.47
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.19
68. UTILITIES	1.05	1.14	1.23	1.31	1.37	1.39	5.92
69. WHOLESALE & RETAIL TRADE	1.47	1.65	1.82	2.01	2.18	2.29	9.33
70. FINANCE & INSURANCE	0.02	0.02	0.02	0.02	0.02	0.03	9.16
71. REAL ESTATE & RENTAL	0.05	0.06	0.07	0.07	0.08	0.08	7.62
72. PERSONAL SERVICES EXC. AUTO.	0.74	0.82	0.89	0.98	1.04	1.09	8.22
73. BUSINESS SERVICES	0.62	0.69	0.75	0.82	0.87	0.90	7.80
75. AUTOMOBILE REPAIR & SERVICE	0.10	0.11	0.12	0.12	0.13	0.14	6.86
76. AMUSEMENTS	0.16	0.17	0.18	0.20	0.21	0.22	6.33
77. MISC. SERVICES	0.65	0.67	0.70	0.75	0.79	0.82	4.64
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.29	4.50	4.73	4.98	5.14	5.23	4.02
82. GOVERNMENT INDUSTRY	10.01	9.84	10.05	10.34	10.54	10.63	1.20
TOTAL, ALL INDUSTRIES	49.80	53.70	57.15	61.18	64.35	66.26	5.88

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## TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
118. CRAFT&RELATED WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	6.25	6.30	6.21	6.09	6.05	6.00	-0.80
2. OTHER AGRICULTURAL PRODUCTS	44.94	44.99	45.07	44.78	44.56	44.36	-0.26
3. FORESTRY & FISHERY PRODUCTS	0.79	0.83	0.88	0.92	0.92	0.91	0.02
4. AGR. FORESTRY & FISHERY SERV.	2.57	2.64	2.67	2.73	2.76	2.80	0.05
5. IRON ORE MINING	1.20	1.29	1.38	1.36	1.33	1.30	-1.52
6. NONFERROUS METAL MINING	3.27	3.45	3.57	3.66	3.63	3.64	2.15
7. COAL MINING	7.58	7.98	8.30	8.51	8.81	9.01	3.51
8. CRUDE PETROLEUM & N. GAS	17.89	17.91	17.90	17.60	17.38	17.55	-0.38
9. STONE&CLAY MINING & QUARRYING	2.33	2.37	2.44	2.54	2.58	2.59	2.14
10. CHEM&FERTILIZER MIN. MINING	1.16	1.19	1.23	1.26	1.27	1.28	2.01
11. NEW CONSTRUCTION	64.84	66.67	68.48	71.11	73.28	74.73	2.88
13. ORNANCE & ACCESSORIES	2.50	2.56	2.60	2.66	2.69	2.72	1.69
14. FOOD & KINDRED PRODUCTS	21.48	21.74	21.83	21.71	21.46	21.25	-0.22
16. FABRIC, YARN & THREAD MILLS	2.56	2.62	2.68	2.72	2.73	2.72	1.22
17. MISC. TEXTILE GOODS	0.50	0.52	0.54	0.55	0.56	0.56	2.26
18. APPAREL	14.57	14.70	15.04	15.33	15.35	15.37	1.07
19. MISC. FABRICATED TEXTILE PROD.	1.61	1.65	1.70	1.73	1.75	1.77	1.85
20. LUMBER & WOOD PRODUCTS	42.87	46.00	47.34	48.68	48.75	47.89	2.24
21. WOOD CONTAINERS	1.00	1.00	1.02	1.04	1.05	1.06	1.16
22. HOUSEHOLD FURNITURE	46.62	49.17	50.78	52.48	53.63	54.13	3.03
23. OTHER FURNITURE & FIXTURES	14.61	14.75	15.23	15.71	16.07	16.42	2.36
24. PAPER & ALLIED PRODUCTS	16.22	16.59	16.67	16.62	16.51	16.39	0.21
25. PAPERBOARD CONTAINERS & BOXES	4.90	5.04	5.15	5.25	5.31	5.34	1.72
26. PRINTING & PUBLISHING	7.58	7.74	7.94	8.12	8.28	8.43	2.16
27. CHEMICALS & PRODUCTS	8.60	8.80	8.97	9.09	9.18	9.26	1.48
28. PLASTICS & SYNTHETIC MATLS.	2.77	2.85	2.94	3.00	3.02	3.01	1.70
29. DRUGS, CLEANING & TOILET PREP.	2.78	2.79	2.83	2.86	2.85	2.85	0.51
30. PAINTS & ALLIED PRODUCTS	0.28	0.30	0.31	0.32	0.32	0.33	3.00
31. PET REFINING & REL. PROD.	2.48	2.48	2.49	2.51	2.52	2.51	0.24
32. RUBBER & MISC. PLASTICS PROD.	4.64	4.86	5.14	5.37	5.57	5.69	4.19
34. FOOTWEAR & OTHER LEATHER PROD.	2.58	2.59	2.60	2.59	2.57	2.55	-0.21
35. GLASS & GLASS PRODUCTS	4.44	4.50	4.57	4.59	4.56	4.51	0.33
36. STONE & CLAY PRODUCTS	7.16	7.43	7.68	8.00	8.17	8.19	2.73
37. PRIMARY FERROUS METALS	37.27	38.04	38.86	39.00	38.80	38.31	0.56
38. NONFERROUS METALS	8.22	8.62	9.06	9.41	9.66	9.88	3.74
39. METAL CONTAINERS	1.29	1.27	1.27	1.30	1.31	1.31	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	26.15	26.11	26.66	27.45	27.95	28.23	1.55

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
118. CRAFT&RELATED WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH 82 TO 87
	82	83	84	85	86	87	
41. SCREW MACHINE PROD.&STAMPINGS	8.96	9.51	9.90	10.16	10.29	10.41	3.04
42. OTHER FAB. METAL PRODUCTS	5.25	5.40	5.63	5.80	5.93	6.05	2.90
43. ENGINES & TURBINES	2.36	2.43	2.51	2.53	2.54	2.54	1.50
44. FARM & GARDEN MACHINERY	3.16	3.26	3.45	3.52	3.58	3.64	2.88
45. CONSTR. & MINING MACHINERY	2.97	3.15	3.32	3.44	3.54	3.58	3.79
46. MATERIALS HANDLING MACH. & EQ.	1.06	1.10	1.17	1.22	1.25	1.28	3.77
47. METALWORKING MACH. & EQ.	3.16	3.26	3.43	3.54	3.61	3.65	2.90
48. SPECIAL INDUSTRY MACHINERY	6.74	6.89	7.23	7.55	7.74	7.90	3.22
49. GENERAL INDUSTRY MACHINERY	3.05	3.16	3.34	3.46	3.55	3.63	3.55
50. MISC. NONELECTRICAL MACH.	0.14	0.15	0.15	0.16	0.16	0.16	2.27
51. OFFICE, COMPUTING & ACCT. MACH.	2.33	2.53	2.75	2.90	3.03	3.19	6.49
52. SERVICE INDUSTRY MACHINES	1.03	1.07	1.13	1.14	1.15	1.15	2.09
53. ELECTRICAL MACHINERY	4.26	4.40	4.67	4.85	4.97	5.08	3.59
55. ELECTRIC LIGHTING & WIRING EQ.	2.36	2.46	2.60	2.73	2.84	2.94	4.49
56. RADIO, TV, & COMMUNICATION EQ.	6.74	6.90	7.11	7.23	7.29	7.41	1.93
57. ELECTRONIC COMPONENTS & ACCESS.	2.35	2.45	2.57	2.67	2.75	2.81	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.83	0.85	0.89	0.90	0.91	0.92	2.11
59. MOTOR VEHICLES & EQUIPMENT	7.85	8.23	8.53	8.69	8.81	8.88	2.51
60. AIRCRAFT & PARTS	8.08	8.40	8.63	8.90	8.93	8.92	2.00
61. OTHER TRANSPORTATION EQ.	10.29	10.60	10.98	11.23	11.26	11.36	1.99
62. INSTRUMENTS & SUPPLIES	4.72	4.81	5.01	5.22	5.36	5.46	2.98
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	8.11	8.20	8.52	8.87	9.13	9.34	2.86
64. MISC. MANUFACTURING	15.79	15.82	16.12	16.37	16.42	16.34	0.69
65. TRANSPORTATION & WAREHOUSING	71.53	72.35	73.03	73.99	73.63	72.81	0.35
66. COMMUNICATION EXC. RADIO & TV	7.18	7.25	7.45	7.54	7.74	7.83	1.76
67. RADIO & TV BROADCASTING	0.35	0.37	0.38	0.38	0.38	0.39	1.75
68. UTILITIES	48.63	48.65	48.64	48.61	48.63	48.57	-0.02
69. WHOLESALE & RETAIL TRADE	239.53	246.54	253.55	259.38	263.82	268.46	2.31
70. FINANCE & INSURANCE	1.94	1.97	2.01	2.06	2.11	2.16	2.09
71. REAL ESTATE & RENTAL	1.99	2.02	2.05	2.09	2.11	2.13	1.29
72. PERSONAL SERVICES EXC. AUTO.	40.10	40.67	41.42	42.18	42.95	43.62	1.69
73. BUSINESS SERVICES	12.73	13.02	13.36	13.78	14.11	14.36	2.45
75. AUTOMOBILE REPAIR & SERVICE	6.72	6.82	6.85	6.86	6.88	6.91	0.58
76. AMUSEMENTS	16.44	16.33	16.45	16.52	16.60	16.66	0.27
77. MISC. SERVICES	100.77	102.73	104.96	107.94	111.30	115.00	2.68
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	89.84	91.73	93.67	95.47	96.69	97.67	1.68
82. GOVERNMENT INDUSTRY	100.76	99.91	100.16	100.98	101.84	103.05	0.45
TOTAL, ALL INDUSTRIES	1,290.52	1,317.61	1,345.49	1,371.35	1,388.80	1,402.90	1.68

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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
119 OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0 06	0 07	0 07	0 07	0 07	0 07	2 61
2. OTHER AGRICULTURAL PRODUCTS	0 11	0 11	0 11	0 12	0 12	0 12	2 50
3. FORESTRY & FISHERY PRODUCTS	0 07	0 07	0 08	0 08	0 09	0 09	5 96
4. AGR., FORESTRY, & FISHERY SERV.	0 18	0 20	0 21	0 22	0 24	0 25	6 15
5. IRON ORE MINING	0 58	0 67	0 73	0 78	0 82	0 85	7 85
6. NONFERROUS METAL MINING	1 10	1 29	1 44	1 60	1 74	1 85	10 91
7. COAL MINING	2 52	2 86	3 13	3 41	3 71	3 88	8 98
8. CRUDE PETROLEUM & N. GAS	9 06	9 62	9 93	10 44	10 93	11 00	3 94
9. STONE & CLAY MINING & QUARRYING	1 08	1 22	1 33	1 50	1 63	1 74	9 95
10. CHEM. & FERTILIZER MIN. MINING	0 15	0 17	0 19	0 20	0 22	0 23	7 91
11. NEW CONSTRUCTION	6 89	7 79	8 39	9 27	9 99	10 49	8 78
13. ORDNANCE & ACCESSORIES	44 22	50 22	54 95	59 62	63 14	65 77	8 26
14. FOOD & KINDRED PRODUCTS	5 33	5 77	6 06	6 41	6 65	6 79	4 98
15. TOBACCO MANUFACTURES	0 03	0 04	0 04	0 04	0 04	0 05	7 15
16. FABRIC, YARN & THREAD MILLS	3 23	3 46	3 62	3 82	4 00	4 10	4 91
17. MISC. TEXTILE GOODS	0 77	0 83	0 90	0 98	1 04	1 08	7 17
18. APPAREL	3 24	3 44	3 61	3 87	4 12	4 35	6 03
19. MISC. FABRICATED TEXTILE PROD.	3 01	3 19	3 32	3 53	3 66	3 79	4 72
20. LUMBER & WOOD PRODUCTS	4 36	4 96	5 38	5 90	6 45	6 86	9 49
21. WOOD CONTAINERS	1 24	1 43	1 57	1 73	1 88	1 98	9 82
22. HOUSEHOLD FURNITURE	0 84	0 90	0 97	1 00	1 02	1 01	3 70
23. OTHER FURNITURE & FIXTURES	1 24	1 29	1 34	1 41	1 49	1 55	4 64
24. PAPER & ALLIED PRODUCTS	3 73	4 10	4 44	4 76	5 02	5 18	6 80
25. PAPERBOARD CONTAINERS & BOXES	2 05	2 30	2 51	2 76	2 97	3 11	8 63
26. PRINTING & PUBLISHING	3 54	3 80	4 03	4 31	4 49	4 58	5 28
27. CHEMICALS & PRODUCTS	6 21	6 82	7 29	7 88	8 43	8 80	7 20
28. PLASTICS & SYNTHETIC MATLS.	1 77	1 97	2 17	2 38	2 55	2 65	8 46
29. DRUGS, CLEANING & TOILET PREP.	0 25	0 26	0 27	0 29	0 30	0 30	3 53
30. PAINTS & ALLIED PRODUCTS	0 91	1 01	1 09	1 19	1 28	1 33	7 97
31. PET REFINING & REL. PROD.	2 28	2 40	2 53	2 69	2 83	2 90	4 98
32. RUBBER & MISC. PLASTICS PROD.	10 08	11 39	12 68	14 22	15 57	16 45	10 29
33. LEATHER TANNING & FINISHING	0 05	0 05	0 05	0 06	0 06	0 06	5 38
34. FOOTWEAR & OTHER LEATHER PROD.	0 34	0 36	0 38	0 41	0 43	0 44	5 52
35. GLASS & GLASS PRODUCTS	1 91	2 16	2 38	2 63	2 85	3 03	9 61
36. STONE & CLAY PRODUCTS	5 96	6 80	7 32	8 08	8 67	9 11	8 87
37. PRIMARY FERROUS METALS	12 64	14 10	15 28	16 69	17 83	18 63	8 07
38. NONFERROUS METALS	12 51	14 33	15 76	17 35	18 69	19 55	9 35



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
119. OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
39. METAL CONTAINERS	0.44	0.47	0.50	0.54	0.58	0.61	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	12.22	13.75	14.70	15.83	16.79	17.71	7.70
41. SCREW MACHINE PROD.&STAMPINGS	8.86	9.89	10.62	11.58	12.27	12.77	7.57
42. OTHER FAB. METAL PRODUCTS	7.91	9.03	9.89	10.94	11.83	12.48	9.56
43. ENGINES & TURBINES	2.90	3.27	3.58	3.80	4.01	4.18	7.60
44. FARM & GARDEN MACHINERY	0.19	0.21	0.24	0.26	0.27	0.28	7.92
45. CONSTR. & MINING MACHINERY	1.21	1.35	1.46	1.57	1.67	1.72	7.27
46. MATERIALS HANDLING MACH. & EQ.	2.08	2.38	2.59	2.86	3.08	3.21	9.14
47. METALWORKING MACH. & EQ.	6.66	7.64	8.38	9.26	9.95	10.38	9.28
48. SPECIAL INDUSTRY MACHINERY	0.46	0.53	0.59	0.68	0.76	0.80	11.85
49. GENERAL INDUSTRY MACHINERY	4.86	5.44	5.86	6.30	6.69	6.96	7.45
50. MISC. NONELECTRICAL MACH.	12.63	13.74	15.09	16.57	17.61	18.15	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	3.80	4.31	4.65	4.96	5.13	5.24	6.67
52. SERVICE INDUSTRY MACHINES	1.45	1.68	1.86	2.13	2.42	2.71	13.37
53. ELECTRICAL MACHINERY	7.23	8.26	9.03	9.90	10.66	11.12	9.00
54. HOUSEHOLD APPLIANCES	0.20	0.22	0.24	0.27	0.29	0.31	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	4.34	4.89	5.24	5.75	6.16	6.42	8.16
56. RADIO, TV, & COMMUNICATION EQ.	73.00	83.53	91.34	98.60	103.31	105.16	7.58
57. ELECTRONIC COMPONENTS & ACCESS.	47.55	56.44	63.39	70.73	76.98	80.48	11.10
58. MISC. ELECTRICAL MACH. & EQ.	2.48	2.86	3.11	3.42	3.72	3.91	9.57
59. MOTOR VEHICLES & EQUIPMENT	9.03	10.78	12.25	14.55	17.04	19.92	17.14
60. AIRCRAFT & PARTS	72.61	82.00	90.19	99.35	106.07	108.70	8.40
61. OTHER TRANSPORTATION EQ.	27.11	28.59	29.52	30.14	31.10	32.06	3.41
62. INSTRUMENTS & SUPPLIES	22.26	25.08	27.37	29.95	31.89	33.01	8.20
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	2.63	2.89	3.14	3.46	3.74	3.94	8.43
64. MISC. MANUFACTURING	1.91	2.09	2.22	2.39	2.52	2.60	6.35
65. TRANSPORTATION & WAREHOUSING	44.41	47.67	50.54	54.41	57.36	59.24	5.93
66. COMMUNICATION EXC. RADIO & TV	0.13	0.14	0.15	0.16	0.17	0.17	5.66
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.15
68. UTILITIES	1.02	1.13	1.22	1.32	1.39	1.43	6.91
69. WHOLESALE & RETAIL TRADE	12.66	14.23	15.60	17.20	18.52	19.40	8.92
70. FINANCE & INSURANCE	0.05	0.06	0.07	0.07	0.08	0.08	9.38
71. REAL ESTATE & RENTAL	0.08	0.09	0.10	0.10	0.11	0.12	8.67
72. PERSONAL SERVICES EXC. AUTO.	7.70	8.55	9.17	9.90	10.45	10.85	7.09
73. BUSINESS SERVICES	7.69	8.60	9.41	10.34	11.06	11.46	8.31
74. EATING & DRINKING PLACES	0.41	0.47	0.53	0.58	0.63	0.66	9.76
75. AUTOMOBILE REPAIR & SERVICE	1.81	2.01	2.18	2.37	2.53	2.62	7.69
76. AMUSEMENTS	0.12	0.14	0.15	0.16	0.18	0.19	8.54
77. MISC. SERVICES	2.31	2.37	2.47	2.62	2.75	2.82	4.07

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
119. OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	25.29	27.37	29.15	31.00	32.16	32.76	5.31
82. GOVERNMENT INDUSTRY	41.76	41.06	41.97	43.25	44.09	44.51	1.28
TOTAL, ALL INDUSTRIES	635.01	706.70	765.27	830.99	883.00	915.17	7.58
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	10.22	10.31	10.15	9.97	9.90	9.82	-0.80
2. OTHER AGRICULTURAL PRODUCTS	73.65	73.74	73.89	73.44	73.09	72.79	-0.23
3. FORESTRY & FISHERY PRODUCTS	2.66	2.81	2.99	3.12	3.12	3.09	3.00
4. AGR. FORESTRY & FISHERY SERV.	9.95	10.15	10.19	10.34	10.40	10.50	1.08
5. IRON ORE MINING	11.39	12.21	13.06	12.92	12.66	12.38	1.69
6. NONFERROUS METAL MINING	18.93	19.97	20.75	21.27	21.12	21.25	2.34
7. COAL MINING	90.06	94.58	98.03	100.40	103.66	105.86	3.29
8. CRUDE PETROLEUM & N. GAS	122.81	122.37	121.79	119.17	117.17	117.79	-0.83
9. STONE&CLAY MINING & QUARRYING	34.44	35.16	36.34	37.88	38.71	39.06	2.55
10. CHEM&FERTILIZER MIN. MINING	7.67	7.87	8.13	8.33	8.40	8.48	2.01
11. NEW CONSTRUCTION	183.25	187.33	191.36	197.67	202.68	205.74	2.34
13. ORNANCE & ACCESSORIES	73.15	75.12	76.75	78.83	80.17	81.31	2.14
14. FOOD & KINDRED PRODUCTS	797.83	807.81	811.75	807.93	799.12	791.73	-0.15
15. TOBACCO MANUFACTURES	26.49	26.49	26.16	25.74	25.45	24.99	-1.16
16. FABRIC, YARN & THREAD MILLS	259.27	266.41	272.97	277.79	279.72	279.55	1.52
17. MISC. TEXTILE GOODS	52.65	54.69	56.98	58.89	59.91	60.37	2.77
18. APPAREL	900.79	908.00	928.30	945.52	946.37	946.49	0.99
19. MISC. FABRICATED TEXTILE PROD.	102.06	104.67	107.53	109.62	110.97	112.09	1.89
20. LUMBER & WOOD PRODUCTS	210.91	229.52	239.50	249.68	253.41	252.27	3.65
21. WOOD CONTAINERS	20.82	20.79	21.18	21.71	21.94	22.06	1.16
22. HOUSEHOLD FURNITURE	145.05	152.98	157.99	163.29	166.85	168.41	3.03
23. OTHER FURNITURE & FIXTURES	78.05	78.63	81.11	83.56	85.33	87.11	2.22
24. PAPER & ALLIED PRODUCTS	200.35	206.60	209.10	210.10	210.19	210.19	0.96
25. PAPERBOARD CONTAINERS & BOXES	93.39	95.78	97.85	99.57	100.53	101.00	1.58
26. PRINTING & PUBLISHING	225.39	224.36	224.20	224.02	223.10	222.09	-0.29
27. CHEMICALS & PRODUCTS	129.05	130.93	132.42	133.20	133.49	133.72	0.71
28. PLASTICS & SYNTHETIC MATLS.	73.21	75.74	78.34	80.12	81.02	81.13	2.08
29. DRUGS, CLEANING & TOILET PREP.	71.28	71.32	71.98	72.42	72.02	71.82	0.15
30. PAINTS & ALLIED PRODUCTS	17.29	18.06	18.66	19.26	19.61	19.80	2.76
31. PET REFINING & REL. PROD.	42.25	42.09	42.24	42.51	42.48	42.32	0.03
32. RUBBER & MISC. PLASTICS PROD.	370.48	382.98	399.05	411.96	422.42	426.65	2.86
33. LEATHER TANNING & FINISHING	8.95	9.25	9.56	9.58	9.57	9.54	1.29
34. FOOTWEAR & OTHER LEATHER PROD.	128.26	128.92	129.80	129.73	129.01	128.34	0.01

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
119. OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
35. GLASS & GLASS PRODUCTS	86.94	88.72	90.56	91.55	91.41	90.84	0.88
36. STONE & CLAY PRODUCTS	184.48	189.22	193.42	199.20	201.14	199.66	1.59
37. PRIMARY FERROUS METALS	177.38	183.24	189.40	192.17	193.28	192.82	1.68
38. NONFERROUS METALS	147.78	153.28	159.53	164.23	166.90	169.27	2.75
39. METAL CONTAINERS	29.83	29.41	29.48	29.99	30.20	30.36	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	273.78	274.62	281.56	291.19	297.59	301.76	1.97
41. SCREW MACHINE PROD.&STAMPINGS	144.45	151.61	156.31	158.78	159.41	159.85	2.05
42. OTHER FAB. METAL PRODUCTS	171.95	177.00	184.48	189.96	193.93	198.08	2.87
43. ENGINES & TURBINES	34.81	35.89	37.18	37.53	37.69	37.81	1.66
44. FARM & GARDEN MACHINERY	58.86	60.29	63.29	64.05	64.67	65.29	2.10
45. CONSTR. & MINING MACHINERY	102.21	108.07	113.76	117.82	120.99	122.37	3.67
46. MATERIALS HANDLING MACH. & EQ.	36.54	37.71	40.01	41.66	42.80	43.70	3.65
47. METALWORKING MACH. & EQ.	129.34	134.49	142.38	148.04	152.21	154.97	3.68
48. SPECIAL INDUSTRY MACHINERY	63.69	64.91	68.02	70.94	72.54	73.93	3.03
49. GENERAL INDUSTRY MACHINERY	110.78	113.45	118.70	121.78	123.77	125.67	2.56
50. MISC. NONELECTRICAL MACH.	110.30	113.16	117.93	120.58	121.68	123.09	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	100.69	103.98	107.66	108.96	109.86	111.74	2.10
52. SERVICE INDUSTRY MACHINES	80.03	83.18	87.15	88.56	88.77	88.81	2.10
53. ELECTRICAL MACHINERY	145.26	147.62	154.10	157.46	159.01	159.99	1.95
54. HOUSEHOLD APPLIANCES	79.38	81.55	83.76	86.61	88.49	89.72	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	90.86	91.39	93.77	95.95	97.31	98.45	1.62
56. RADIO, TV, & COMMUNICATION EQ.	172.84	175.98	180.60	182.83	183.61	185.80	1.46
57. ELECTRONIC COMPONENTS & ACCESS.	217.08	225.78	236.43	245.40	251.81	256.52	3.40
58. MISC. ELECTRICAL MACH. & EQ.	91.36	94.53	98.29	99.43	100.66	101.47	2.12
59. MOTOR VEHICLES & EQUIPMENT	467.01	488.21	504.77	512.86	518.51	521.43	2.23
60. AIRCRAFT & PARTS	145.44	151.00	154.85	159.44	159.55	159.16	1.82
61. OTHER TRANSPORTATION EQ.	93.55	96.39	99.85	102.07	102.37	103.30	2.00
62. INSTRUMENTS & SUPPLIES	191.29	194.54	202.16	209.95	215.43	218.92	2.74
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	60.63	61.41	63.97	66.72	68.86	70.54	3.07
64. MISC. MANUFACTURING	172.83	176.08	182.35	188.12	191.66	193.66	2.30
65. TRANSPORTATION & WAREHOUSING	1,044.67	1,084.78	1,123.70	1,168.16	1,192.41	1,209.28	2.97
66. COMMUNICATION EXC. RADIO & TV	5.19	5.25	5.40	5.48	5.64	5.71	1.94
67. RADIO & TV BROADCASTING	0.35	0.36	0.37	0.38	0.38	0.38	1.71
68. UTILITIES	47.50	47.99	48.43	48.86	49.32	49.71	0.91
69. WHOLESALE & RETAIL TRADE	2,068.54	2,120.65	2,172.53	2,214.22	2,243.94	2,275.42	1.92
70. FINANCE & INSURANCE	6.10	6.20	6.33	6.49	6.66	6.83	2.29
71. REAL ESTATE & RENTAL	2.82	2.89	2.97	3.05	3.11	3.16	2.28
72. PERSONAL SERVICES EXC. AUTO.	420.02	421.28	424.46	427.75	431.07	433.41	0.63
73. BUSINESS SERVICES	158.44	162.93	168.02	174.10	179.16	183.11	2.94

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
119. OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
74. EATING & DRINKING PLACES	26.76	27.24	27.69	27.93	28.12	28.21	1.06
75. AUTOMOBILE REPAIR & SERVICE	124.71	127.71	129.41	130.56	131.83	133.41	1.36
76. AMUSEMENTS	12.77	12.96	13.33	13.66	14.01	14.34	2.34
77. MISC. SERVICES	357.84	362.59	368.38	376.74	386.46	397.32	2.12
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	494.21	506.11	519.32	530.12	538.30	540.86	1.82
82. GOVERNMENT INDUSTRY	291.14	289.32	290.71	293.90	297.15	301.12	0.68
TOTAL, ALL INDUSTRIES	13,630.84	13,959.02	14,323.16	14,621.05	14,791.60	14,917.23	1.82

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
120. ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	20.92	23.81	26.10	28.37	30.10	31.40	8.46
20. LUMBER & WOOD PRODUCTS	0.90	1.04	1.15	1.28	1.42	1.54	11.45
21. WOOD CONTAINERS	0.28	0.32	0.35	0.39	0.42	0.44	9.83
22. HOUSEHOLD FURNITURE	0.18	0.20	0.21	0.22	0.22	0.22	3.70
23. OTHER FURNITURE & FIXTURES	0.34	0.35	0.36	0.38	0.40	0.42	4.40
24. PAPER & ALLIED PRODUCTS	0.17	0.19	0.21	0.22	0.24	0.25	7.32
25. PAPERBOARD CONTAINERS & BOXES	0.12	0.13	0.14	0.16	0.17	0.18	8.78
32. RUBBER & MISC. PLASTICS PROD.	1.05	1.19	1.33	1.50	1.64	1.74	10.49
34. FOOTWEAR & OTHER LEATHER PROD.	0.02	0.02	0.02	0.03	0.03	0.03	7.26
35. GLASS & GLASS PRODUCTS	0.10	0.12	0.14	0.15	0.17	0.19	12.60
36. STONE & CLAY PRODUCTS	0.19	0.21	0.23	0.25	0.26	0.28	8.29
37. PRIMARY FERROUS METALS	0.11	0.12	0.13	0.14	0.15	0.16	8.18
38. NONFERROUS METALS	0.46	0.53	0.58	0.64	0.69	0.72	9.52
39. METAL CONTAINERS	0.07	0.08	0.08	0.09	0.10	0.10	8.60
40. FAB. STRUCTURAL METAL PRODUCTS	2.95	3.32	3.55	3.83	4.07	4.29	7.81
41. SCREW MACHINE PROD. & STAMPINGS	0.91	1.02	1.09	1.19	1.27	1.32	7.69
42. OTHER FAB. METAL PRODUCTS	1.25	1.44	1.58	1.76	1.91	2.02	10.00
43. ENGINES & TURBINES	0.71	0.81	0.88	0.94	0.99	1.04	7.71
44. FARM & GARDEN MACHINERY	0.07	0.08	0.09	0.10	0.10	0.11	8.11
45. CONSTR. & MINING MACHINERY	0.27	0.30	0.32	0.35	0.37	0.38	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.46	0.52	0.57	0.63	0.68	0.71	9.12
47. METALWORKING MACH. & EQ.	1.13	1.29	1.42	1.57	1.69	1.76	9.36
48. SPECIAL INDUSTRY MACHINERY	0.12	0.14	0.15	0.17	0.19	0.21	12.06
49. GENERAL INDUSTRY MACHINERY	1.35	1.51	1.63	1.75	1.86	1.94	7.51
50. MISC. NONELECTRICAL MACH.	1.52	1.65	1.82	1.99	2.12	2.18	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	2.89	3.28	3.53	3.76	3.89	3.97	6.56
52. SERVICE INDUSTRY MACHINES	0.71	0.82	0.91	1.04	1.18	1.33	13.37
53. ELECTRICAL MACHINERY	3.47	3.97	4.34	4.76	5.12	5.34	9.01
54. HOUSEHOLD APPLIANCES	0.11	0.13	0.14	0.15	0.17	0.18	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	2.28	2.57	2.75	3.02	3.24	3.38	8.25
56. RADIO, TV, & COMMUNICATION EQ.	45.88	52.44	57.29	61.79	64.68	65.79	7.48
57. ELECTRONIC COMPONENTS & ACCESS.	29.68	35.27	39.65	44.29	48.25	50.50	11.21
58. MISC. ELECTRICAL MACH. & EQ.	1.49	1.72	1.87	2.07	2.25	2.36	9.57
59. MOTOR VEHICLES & EQUIPMENT	3.78	4.51	5.13	6.09	7.13	8.34	17.14
60. AIRCRAFT & PARTS	26.01	29.37	32.31	35.60	38.01	38.96	8.42
61. OTHER TRANSPORTATION EQ.	4.28	4.53	4.69	4.80	4.96	5.13	3.65
62. INSTRUMENTS & SUPPLIES	13.18	14.84	16.18	17.70	18.83	19.48	8.12

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
120. ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	1.06	1.17	1.27	1.40	1.52	1.60	8.52
64. MISC. MANUFACTURING	0.60	0.66	0.70	0.76	0.80	0.82	6.49
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.76	0.83	0.89	0.95	0.98	0.99	5.38
82. GOVERNMENT INDUSTRY	0.39	0.38	0.39	0.40	0.41	0.41	0.80
TOTAL, ALL INDUSTRIES	172.22	196.88	216.20	236.66	252.67	262.17	8.77
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	34.61	35.62	36.46	37.51	38.22	38.82	2.32
20. LUMBER & WOOD PRODUCTS	43.33	48.08	51.11	54.23	55.97	56.63	5.50
21. WOOD CONTAINERS	4.67	4.66	4.75	4.87	4.92	4.95	1.17
22. HOUSEHOLD FURNITURE	31.78	33.52	34.62	35.78	36.56	36.90	3.03
23. OTHER FURNITURE & FIXTURES	21.34	21.44	22.06	22.67	23.11	23.54	1.98
24. PAPER & ALLIED PRODUCTS	9.33	9.67	9.83	9.93	9.98	10.02	1.45
25. PAPERBOARD CONTAINERS & BOXES	5.27	5.41	5.53	5.64	5.70	5.73	1.72
32. RUBBER & MISC. PLASTICS PROD.	38.72	40.11	41.87	43.31	44.48	45.00	3.05
34. FOOTWEAR & OTHER LEATHER PROD.	7.61	7.77	7.96	8.08	8.17	8.26	1.66
35. GLASS & GLASS PRODUCTS	4.69	4.94	5.19	5.38	5.51	5.61	3.63
36. STONE & CLAY PRODUCTS	5.75	5.86	5.96	6.11	6.13	6.06	1.05
37. PRIMARY FERROUS METALS	1.50	1.55	1.61	1.63	1.64	1.64	1.79
38. NONFERROUS METALS	5.42	5.63	5.87	6.05	6.16	6.26	2.92
39. METAL CONTAINERS	4.92	4.86	4.87	4.95	4.98	5.01	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	66.03	66.31	68.06	70.45	72.07	73.15	2.07
41. SCREW MACHINE PROD.&STAMPINGS	14.83	15.58	16.08	16.36	16.44	16.50	2.16
42. OTHER FAB. METAL PRODUCTS	27.26	28.18	29.50	30.49	31.25	32.03	3.28
43. ENGINES & TURBINES	8.58	8.85	9.18	9.28	9.33	9.37	1.78
44. FARM & GARDEN MACHINERY	22.12	22.70	23.87	24.20	24.47	24.74	2.27
45. CONSTR. & MINING MACHINERY	22.50	23.79	25.03	25.92	26.61	26.91	3.64
46. MATERIALS HANDLING MACH. & EQ.	8.04	8.30	8.80	9.17	9.41	9.61	3.62
47. METALWORKING MACH. & EQ.	21.88	22.77	24.12	25.10	25.83	26.31	3.76
48. SPECIAL INDUSTRY MACHINERY	16.21	16.56	17.38	18.16	18.60	18.99	3.22
49. GENERAL INDUSTRY MACHINERY	30.72	31.48	32.96	33.84	34.41	34.96	2.62
50. MISC. NONELECTRICAL MACH.	13.26	13.61	14.18	14.50	14.64	14.81	2.23
51. OFFICE,COMPUTING & ACCT. MACH.	76.61	79.02	81.73	82.63	83.23	84.57	2.00
52. SERVICE INDUSTRY MACHINES	39.15	40.69	42.64	43.32	43.42	43.44	2.10
53. ELECTRICAL MACHINERY	69.73	70.87	74.00	75.62	76.38	76.86	1.97
54. HOUSEHOLD APPLIANCES	44.88	46.11	47.36	48.97	50.04	50.73	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	47.67	47.99	49.29	50.47	51.23	51.86	1.70
56. RADIO,TV, & COMMUNICATION EQ.	108.62	110.49	113.28	114.58	114.96	116.23	1.36

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
120. ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
57. ELECTRONIC COMPONENTS & ACCESS.	135.49	141.08	147.90	153.67	157.85	160.96	3.50
58. MISC. ELECTRICAL MACH. & EQ.	55.15	57.07	59.34	60.02	60.77	61.26	2.12
59. MOTOR VEHICLES & EQUIPMENT	195.42	204.29	211.22	214.61	216.97	218.19	2.23
60. AIRCRAFT & PARTS	52.09	54.09	55.47	57.13	57.17	57.04	1.83
61. OTHER TRANSPORTATION EQ.	14.79	15.27	15.86	16.25	16.33	16.52	2.24
62. INSTRUMENTS & SUPPLIES	113.28	115.12	119.55	124.08	127.23	129.21	2.67
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	24.51	24.85	25.90	27.04	27.93	28.64	3.16
64. MISC. MANUFACTURING	54.39	55.48	57.54	59.43	60.63	61.33	2.43
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	6.50	6.70	6.96	7.15	7.26	7.35	2.49
82. GOVERNMENT INDUSTRY	0.44	0.44	0.45	0.46	0.47	0.48	1.93
TOTAL. ALL INDUSTRIES	1,509.17	1,556.91	1,615.42	1,659.13	1,686.57	1,706.57	2.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
121. AIRCRAFT STRUCTURE&SURFACE ASSEMB  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.18	1.34	1.47	1.59	1.69	1.76	8.26
60. AIRCRAFT & PARTS	9.66	10.93	12.05	13.29	14.22	14.59	8.59
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.03	0.03	0.03	0.03	0.03	0.03	4.33
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	-0.33
TOTAL, ALL INDUSTRIES	10.88	12.31	13.56	14.93	15.95	16.40	8.54
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.95	2.01	2.05	2.11	2.14	2.17	2.14
60. AIRCRAFT & PARTS	19.36	20.13	20.68	21.33	21.38	21.37	2.00
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.06	0.06	0.06	0.06	0.07	0.07	2.01
82. GOVERNMENT INDUSTRY	0.01	0.01	0.01	0.01	0.01	0.01	-0.33
TOTAL, ALL INDUSTRIES	21.39	22.22	22.82	23.53	23.61	23.63	2.01
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
122. ELECTRICAL&ELECTRONIC ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.28	1.45	1.59	1.73	1.83	1.90	8.28
43. ENGINES & TURBINES	0.08	0.07	0.07	0.08	0.08	0.09	7.72
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.02	0.03	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.12
47. METALWORKING MACH. & EQ.	0.12	0.13	0.15	0.16	0.18	0.18	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.02	0.02	0.02	0.02	12.07
49. GENERAL INDUSTRY MACHINERY	0.13	0.15	0.16	0.17	0.18	0.19	7.51
50. MISC. NONELECTRICAL MACH.	0.04	0.04	0.05	0.05	0.05	0.05	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	1.37	1.55	1.66	1.77	1.82	1.86	6.31
52. SERVICE INDUSTRY MACHINES	0.08	0.08	0.08	0.10	0.11	0.12	13.37
53. ELECTRICAL MACHINERY	0.90	1.03	1.13	1.24	1.34	1.40	9.13
55. ELECTRIC LIGHTING & WIRING EQ.	0.18	0.20	0.22	0.24	0.25	0.26	8.25
56. RADIO, TV, & COMMUNICATION EQ.	16.27	18.63	20.38	22.00	23.06	23.48	7.60
57. ELECTRONIC COMPONENTS & ACCESS.	9.18	10.93	12.31	13.76	15.01	15.73	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.17	0.19	0.21	0.23	0.25	0.26	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.02	0.02	0.02	0.03	0.03	17.16
60. AIRCRAFT & PARTS	3.79	4.29	4.72	5.21	5.58	5.72	8.59
61. OTHER TRANSPORTATION EQ.	0.21	0.22	0.23	0.23	0.24	0.25	3.14
62. INSTRUMENTS & SUPPLIES	3.20	3.61	3.93	4.30	4.57	4.72	8.07
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.22	0.24	0.26	0.29	0.31	0.33	8.58
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.07	0.07	0.08	0.08	0.08	0.08	5.23
TOTAL, ALL INDUSTRIES	37.33	42.96	47.31	51.74	55.06	56.76	8.74
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	2.12	2.17	2.22	2.28	2.32	2.35	2.15
43. ENGINES & TURBINES	0.72	0.74	0.77	0.78	0.78	0.78	1.78
45. CONSTR. & MINING MACHINERY	1.51	1.60	1.68	1.74	1.79	1.81	3.65
46. MATERIALS HANDLING MACH. & EQ.	0.54	0.56	0.59	0.62	0.63	0.65	3.63
47. METALWORKING MACH. & EQ.	2.28	2.37	2.51	2.61	2.69	2.74	3.76
48. SPECIAL INDUSTRY MACHINERY	1.64	1.67	1.75	1.83	1.88	1.92	3.22
49. GENERAL INDUSTRY MACHINERY	3.00	3.07	3.22	3.30	3.36	3.41	2.62
50. MISC. NONELECTRICAL MACH.	0.33	0.34	0.35	0.36	0.36	0.37	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	36.29	37.33	38.52	38.85	39.05	39.60	1.76
52. SERVICE INDUSTRY MACHINES	3.57	3.71	3.89	3.96	3.96	3.97	2.10
53. ELECTRICAL MACHINERY	18.15	18.47	19.30	19.75	19.97	20.12	2.08
55. ELECTRIC LIGHTING & WIRING EQ.	3.73	3.76	3.86	3.95	4.01	4.06	1.70

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
122. ELECTRICAL&ELECTRONIC ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN
							% GROWTH 82 TO 87
56. RADIO, TV, & COMMUNICATION EQ.	38.54	39.25	40.29	40.79	40.98	41.48	1.48
57. ELECTRONIC COMPONENTS & ACCESS.	41.92	43.72	45.90	47.75	49.12	50.15	3.65
58. MISC. ELECTRICAL MACH. & EQ.	6.11	6.32	6.57	6.65	6.73	6.79	2.12
59. MOTOR VEHICLES & EQUIPMENT	0.70	0.73	0.75	0.76	0.77	0.78	2.24
60. AIRCRAFT & PARTS	7.59	7.90	8.11	8.37	8.39	8.38	2.00
61. OTHER TRANSPORTATION EQ.	0.73	0.75	0.77	0.79	0.79	0.80	1.73
62. INSTRUMENTS & SUPPLIES	27.53	27.97	29.03	30.11	30.86	31.33	2.62
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	4.99	5.07	5.29	5.52	5.71	5.85	3.22
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.36	0.37	0.38	0.39	0.40	0.40	2.39
TOTAL, ALL INDUSTRIES	203.42	208.96	216.90	222.35	225.75	228.94	2.39

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY. NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
123. ELECTRO-MECHANICAL EQUIP. ASSEMB.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.52	0.60	0.66	0.72	0.76	0.80	8.73
43. ENGINES & TURBINES	0.03	0.03	0.04	0.04	0.04	0.04	7.70
45. CONSTR. & MINING MACHINERY	0.02	0.02	0.02	0.02	0.02	0.02	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.03	0.03	0.04	0.04	0.04	0.05	9.12
47. METALWORKING MACH. & EQ.	0.09	0.11	0.12	0.13	0.14	0.15	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.08
49. GENERAL INDUSTRY MACHINERY	0.13	0.14	0.15	0.17	0.18	0.18	7.52
50. MISC. NONELECTRICAL MACH.	0.18	0.19	0.21	0.23	0.25	0.25	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.23	0.27	0.29	0.31	0.32	0.33	7.32
52. SERVICE INDUSTRY MACHINES	0.03	0.04	0.04	0.05	0.05	0.06	13.36
53. ELECTRICAL MACHINERY	0.14	0.15	0.17	0.19	0.20	0.21	8.98
55. ELECTRIC LIGHTING & WIRING EQ.	0.06	0.07	0.08	0.08	0.09	0.09	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.96	2.25	2.48	2.69	2.84	2.90	8.20
57. ELECTRONIC COMPONENTS & ACCESS.	0.99	1.17	1.32	1.48	1.61	1.69	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.04	0.04	0.04	0.05	0.05	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.03	0.04	0.04	0.05	0.06	0.07	17.14
60. AIRCRAFT & PARTS	1.88	2.13	2.35	2.59	2.77	2.85	8.59
61. OTHER TRANSPORTATION EQ.	0.38	0.40	0.42	0.43	0.44	0.45	3.23
62. INSTRUMENTS & SUPPLIES	1.21	1.38	1.48	1.62	1.73	1.78	8.08
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.04	0.04	0.05	0.05	0.05	8.59
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.03	0.03	0.03	0.03	0.04	0.04	5.35
TOTAL, ALL INDUSTRIES	8.02	9.13	10.02	10.96	11.68	12.08	8.54
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.87	0.89	0.92	0.96	0.97	0.98	2.58
43. ENGINES & TURBINES	0.35	0.36	0.37	0.38	0.38	0.38	1.76
45. CONSTR. & MINING MACHINERY	1.48	1.56	1.64	1.70	1.74	1.76	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.53	0.54	0.58	0.60	0.62	0.63	3.62
47. METALWORKING MACH. & EQ.	1.83	1.91	2.02	2.10	2.16	2.20	3.76
48. SPECIAL INDUSTRY MACHINERY	0.84	0.86	0.90	0.94	0.97	0.99	3.22
49. GENERAL INDUSTRY MACHINERY	2.90	2.98	3.12	3.20	3.25	3.31	2.62
50. MISC. NONELECTRICAL MACH.	1.54	1.58	1.64	1.68	1.70	1.72	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	6.16	6.40	6.67	6.79	6.89	7.04	2.72
52. SERVICE INDUSTRY MACHINES	1.78	1.85	1.94	1.97	1.97	1.97	2.10
53. ELECTRICAL MACHINERY	2.72	2.76	2.88	2.95	2.97	2.99	1.93
55. ELECTRIC LIGHTING & WIRING EQ.	1.30	1.31	1.34	1.37	1.40	1.41	1.70

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
123. ELECTRO-MECHANICAL EQUIP. ASSEMB.  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
56. RADIO, TV, & COMMUNICATION EQ.	4.63	4.75	4.90	4.99	5.04	5.13	2.05
57. ELECTRONIC COMPONENTS & ACCESS.	4.50	4.69	4.93	5.13	5.27	5.38	3.65
58. MISC. ELECTRICAL MACH. & EQ.	1.18	1.22	1.27	1.29	1.30	1.31	2.12
59. MOTOR VEHICLES & EQUIPMENT	1.53	1.60	1.65	1.68	1.69	1.70	2.23
60. AIRCRAFT & PARTS	3.78	3.93	4.03	4.16	4.17	4.17	2.00
61. OTHER TRANSPORTATION EQ.	1.33	1.36	1.41	1.44	1.44	1.45	1.82
62. INSTRUMENTS & SUPPLIES	10.39	10.56	10.96	11.37	11.65	11.83	2.62
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.80	0.81	0.84	0.88	0.91	0.93	3.22
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.16	0.17	0.18	0.18	0.18	0.19	2.59
TOTAL, ALL INDUSTRIES	51.67	53.20	55.36	56.93	57.89	58.71	2.59

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
124. INSTRUMENT MAKERS&ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.05	0.06	0.06	0.07	0.07	0.08	9.05
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.27
56. RADIO, TV, & COMMUNICATION EQ.	0.39	0.45	0.50	0.54	0.57	0.58	8.30
57. ELECTRONIC COMPONENTS & ACCESS.	0.20	0.24	0.27	0.30	0.33	0.35	11.36
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.03	0.03	0.03	0.03	9.57
62. INSTRUMENTS & SUPPLIES	2.14	2.41	2.63	2.88	3.06	3.17	8.19
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.76
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.03	0.03	0.03	0.03	0.03	0.03	5.61
TOTAL, ALL INDUSTRIES	2.89	3.27	3.59	3.93	4.18	4.33	8.45
TOTAL EMPLOYMENT							
53. ELECTRICAL MACHINERY	1.01	1.03	1.08	1.10	1.11	1.12	2.00
55. ELECTRIC LIGHTING & WIRING EQ.	0.19	0.19	0.20	0.20	0.21	0.21	1.71
56. RADIO, TV, & COMMUNICATION EQ.	0.93	0.95	0.98	1.00	1.01	1.03	2.14
57. ELECTRONIC COMPONENTS & ACCESS.	0.92	0.96	1.01	1.05	1.08	1.10	3.64
58. MISC. ELECTRICAL MACH. & EQ.	0.77	0.80	0.83	0.84	0.85	0.85	2.12
62. INSTRUMENTS & SUPPLIES	18.37	18.68	19.41	20.16	20.68	21.01	2.73
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.13	1.15	1.20	1.25	1.30	1.33	3.38
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.14	0.14	0.15	0.15	0.16	0.16	2.71
TOTAL, ALL INDUSTRIES	23.73	24.18	25.14	26.05	26.70	27.13	2.71
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NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
125. MACHINE ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.27	0.30	0.34	0.37	0.39	0.41	9.32
43. ENGINES & TURBINES	0.42	0.48	0.52	0.55	0.58	0.61	7.72
44. FARM & GARDEN MACHINERY	0.02	0.02	0.02	0.02	0.02	0.02	8.11
45. CONSTR. & MINING MACHINERY	0.12	0.13	0.14	0.16	0.16	0.17	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.21	0.24	0.26	0.28	0.30	0.32	9.12
47. METALWORKING MACH. & EQ.	0.44	0.50	0.55	0.61	0.66	0.69	9.36
48. SPECIAL INDUSTRY MACHINERY	0.05	0.06	0.07	0.08	0.09	0.10	12.06
49. GENERAL INDUSTRY MACHINERY	0.35	0.39	0.42	0.46	0.48	0.50	7.51
50. MISC. NONELECTRICAL MACH.	0.29	0.31	0.34	0.38	0.40	0.41	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.26	0.29	0.32	0.34	0.36	0.37	7.32
52. SERVICE INDUSTRY MACHINES	0.06	0.06	0.07	0.08	0.09	0.10	13.37
53. ELECTRICAL MACHINERY	0.31	0.35	0.38	0.42	0.45	0.47	8.94
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.10	0.11	0.12	0.13	0.14	0.15	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.42	0.48	0.53	0.58	0.61	0.62	8.17
57. ELECTRONIC COMPONENTS & ACCESS.	0.16	0.19	0.21	0.23	0.25	0.27	11.35
58. MISC. ELECTRICAL MACH. & EQ.	0.09	0.11	0.11	0.13	0.14	0.14	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.10	0.12	0.13	0.16	0.19	0.22	17.14
60. AIRCRAFT & PARTS	1.63	1.84	2.03	2.24	2.39	2.45	8.60
61. OTHER TRANSPORTATION EQ.	0.39	0.41	0.43	0.44	0.46	0.47	3.88
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.13	0.14	0.15	0.16	0.17	0.17	6.09
TOTAL, ALL INDUSTRIES	5.79	6.55	7.17	7.83	8.36	8.68	8.43
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.44	0.46	0.47	0.49	0.50	0.51	3.13
43. ENGINES & TURBINES	5.06	5.22	5.41	5.47	5.50	5.52	1.78
44. FARM & GARDEN MACHINERY	4.64	4.76	5.00	5.07	5.13	5.19	2.27
45. CONSTR. & MINING MACHINERY	10.12	10.70	11.26	11.66	11.97	12.11	3.64
46. MATERIALS HANDLING MACH. & EQ.	3.62	3.73	3.96	4.12	4.23	4.32	3.62
47. METALWORKING MACH. & EQ.	8.51	8.85	9.38	9.76	10.04	10.23	3.76
48. SPECIAL INDUSTRY MACHINERY	7.52	7.68	8.06	8.42	8.63	8.81	3.21
49. GENERAL INDUSTRY MACHINERY	8.01	8.21	8.59	8.82	8.97	9.12	2.62
50. MISC. NONELECTRICAL MACH.	2.51	2.57	2.68	2.74	2.76	2.80	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	6.82	7.09	7.39	7.52	7.63	7.80	2.72
52. SERVICE INDUSTRY MACHINES	3.09	3.21	3.37	3.42	3.43	3.43	2.11
53. ELECTRICAL MACHINERY	6.19	6.29	6.56	6.70	6.76	6.80	1.90

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
125. MACHINE ASSEMBLERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
54. HOUSEHOLD APPLIANCES	2.08	2.14	2.20	2.27	2.32	2.35	2.49
55. ELECTRIC LIGHTING & WIRING EQ.	2.06	2.08	2.13	2.19	2.22	2.25	1.70
56. RADIO, TV, & COMMUNICATION EQ.	1.00	1.02	1.05	1.07	1.08	1.10	2.02
57. ELECTRONIC COMPONENTS & ACCESS.	0.71	0.74	0.78	0.81	0.83	0.85	3.63
58. MISC. ELECTRICAL MACH. & EQ.	3.37	3.48	3.62	3.66	3.71	3.74	2.12
59. MOTOR VEHICLES & EQUIPMENT	5.11	5.35	5.53	5.62	5.68	5.71	2.23
60. AIRCRAFT & PARTS	3.26	3.39	3.48	3.59	3.60	3.59	2.00
61. OTHER TRANSPORTATION EQ.	1.34	1.39	1.45	1.49	1.50	1.52	2.46
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.68	1.74	1.82	1.87	1.90	1.93	2.73
TOTAL, ALL INDUSTRIES	87.15	90.11	94.21	96.78	98.42	99.69	2.73

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
126. ASSEMBLERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	17.67	20.11	22.05	23.97	25.43	26.53	8.46
20. LUMBER & WOOD PRODUCTS	0.90	1.04	1.15	1.28	1.42	1.54	11.45
21. WOOD CONTAINERS	0.28	0.32	0.35	0.39	0.42	0.44	9.83
22. HOUSEHOLD FURNITURE	0.18	0.20	0.21	0.22	0.22	0.22	3.70
23. OTHER FURNITURE & FIXTURES	0.34	0.35	0.36	0.38	0.40	0.42	4.40
24. PAPER & ALLIED PRODUCTS	0.17	0.19	0.21	0.22	0.24	0.25	7.32
25. PAPERBOARD CONTAINERS & BOXES	0.12	0.13	0.14	0.16	0.17	0.18	8.78
32. RUBBER & MISC. PLASTICS PROD.	1.05	1.19	1.33	1.50	1.64	1.74	10.49
34. FOOTWEAR & OTHER LEATHER PROD.	0.02	0.02	0.02	0.03	0.03	0.03	7.26
35. GLASS & GLASS PRODUCTS	0.10	0.12	0.14	0.15	0.17	0.19	12.60
36. STONE & CLAY PRODUCTS	0.19	0.21	0.23	0.25	0.26	0.28	8.29
37. PRIMARY FERROUS METALS	0.11	0.12	0.13	0.14	0.15	0.16	8.18
38. NONFERROUS METALS	0.46	0.53	0.58	0.64	0.69	0.72	9.52
39. METAL CONTAINERS	0.07	0.08	0.08	0.09	0.10	0.10	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	2.95	3.32	3.55	3.83	4.07	4.29	7.81
41. SCREW MACHINE PROD. & STAMPINGS	0.91	1.02	1.09	1.19	1.27	1.32	7.69
42. OTHER FAB. METAL PRODUCTS	1.25	1.44	1.58	1.76	1.91	2.02	10.00
43. ENGINES & TURBINES	0.20	0.23	0.25	0.27	0.28	0.30	7.71
44. FARM & GARDEN MACHINERY	0.05	0.06	0.07	0.07	0.08	0.08	8.11
45. CONSTR. & MINING MACHINERY	0.11	0.12	0.13	0.14	0.15	0.16	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.19	0.22	0.24	0.26	0.28	0.30	9.12
47. METALWORKING MACH. & EQ.	0.48	0.55	0.60	0.67	0.71	0.75	9.36
48. SPECIAL INDUSTRY MACHINERY	0.04	0.05	0.06	0.07	0.07	0.08	12.06
49. GENERAL INDUSTRY MACHINERY	0.74	0.83	0.89	0.96	1.02	1.06	7.51
50. MISC. NONELECTRICAL MACH.	1.02	1.11	1.22	1.34	1.42	1.46	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	1.03	1.17	1.26	1.34	1.38	1.41	6.52
52. SERVICE INDUSTRY MACHINES	0.56	0.65	0.71	0.82	0.93	1.04	13.37
53. ELECTRICAL MACHINERY	2.07	2.37	2.59	2.84	3.05	3.19	8.97
54. HOUSEHOLD APPLIANCES	0.10	0.12	0.13	0.14	0.15	0.16	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	1.93	2.18	2.33	2.56	2.75	2.87	8.25
56. RADIO, TV, & COMMUNICATION EQ.	26.83	30.63	33.41	35.98	37.61	38.20	7.32
57. ELECTRONIC COMPONENTS & ACCESS.	19.15	22.74	25.55	28.51	31.04	32.46	11.13
58. MISC. ELECTRICAL MACH. & EQ.	1.18	1.37	1.49	1.64	1.78	1.87	9.57
59. MOTOR VEHICLES & EQUIPMENT	3.64	4.34	4.93	5.86	6.86	8.02	17.14
60. AIRCRAFT & PARTS	9.04	10.18	11.16	12.26	13.05	13.34	8.09
61. OTHER TRANSPORTATION EQ.	3.30	3.49	3.62	3.70	3.83	3.96	3.71
62. INSTRUMENTS & SUPPLIES	6.63	7.47	8.14	8.91	9.48	9.81	8.14



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
126. ASSEMBLERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
63. OPTICAL,OPHTHALMIC & PHOTO EQ.	0.76	0.84	0.91	1.00	1.09	1.15	8.49
64. MISC. MANUFACTURING	0.60	0.66	0.70	0.76	0.80	0.82	6.49
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.39	0.43	0.46	0.49	0.50	0.51	5.48
82. GOVERNMENT INDUSTRY	0.38	0.37	0.38	0.39	0.40	0.40	0.82
TOTAL, ALL INDUSTRIES	107.22	122.55	134.44	147.16	157.32	163.80	8.85
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	29.24	30.09	30.80	31.69	32.29	32.80	2.33
20. LUMBER & WOOD PRODUCTS	43.33	48.08	51.11	54.23	55.97	56.63	5.50
21. WOOD CONTAINERS	4.67	4.66	4.75	4.87	4.92	4.95	1.17
22. HOUSEHOLD FURNITURE	31.78	33.52	34.62	35.78	36.56	36.90	3.03
23. OTHER FURNITURE & FIXTURES	21.34	21.44	22.06	22.67	23.11	23.54	1.98
24. PAPER & ALLIED PRODUCTS	9.33	9.67	9.83	9.93	9.98	10.02	1.45
25. PAPERBOARD CONTAINERS & BOXES	5.27	5.41	5.53	5.64	5.70	5.73	1.72
32. RUBBER & MISC. PLASTICS PROD.	38.72	40.11	41.87	43.31	44.48	45.00	3.05
34. FOOTWEAR & OTHER LEATHER PROD.	7.61	7.77	7.96	8.08	8.17	8.26	1.66
35. GLASS & GLASS PRODUCTS	4.69	4.94	5.19	5.38	5.51	5.61	3.63
36. STONE & CLAY PRODUCTS	5.75	5.86	5.96	6.11	6.13	6.06	1.05
37. PRIMARY FERROUS METALS	1.50	1.55	1.61	1.63	1.64	1.64	1.79
38. NONFERROUS METALS	5.42	5.63	5.87	6.05	6.16	6.26	2.92
39. METAL CONTAINERS	4.92	4.86	4.87	4.95	4.98	5.01	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	66.03	66.31	68.06	70.45	72.07	73.15	2.07
41. SCREW MACHINE PROD.&STAMPINGS	14.83	15.58	16.08	16.36	16.44	16.50	2.16
42. OTHER FAB. METAL PRODUCTS	27.26	28.18	29.50	30.49	31.25	32.03	3.28
43. ENGINES & TURBINES	2.45	2.53	2.62	2.65	2.67	2.68	1.77
44. FARM & GARDEN MACHINERY	16.63	17.07	17.95	18.19	18.40	18.60	2.27
45. CONSTR. & MINING MACHINERY	9.39	9.93	10.45	10.82	11.11	11.23	3.64
46. MATERIALS HANDLING MACH. & EQ.	3.36	3.46	3.67	3.83	3.93	4.01	3.62
47. METALWORKING MACH. & EQ.	9.26	9.64	10.21	10.63	10.93	11.14	3.76
48. SPECIAL INDUSTRY MACHINERY	6.21	6.34	6.66	6.96	7.13	7.28	3.22
49. GENERAL INDUSTRY MACHINERY	16.80	17.22	18.03	18.51	18.82	19.13	2.82
50. MISC. NONELECTRICAL MACH.	8.89	9.12	9.51	9.72	9.81	9.93	2.23
51. OFFICE,COMPUTING & ACCT. MACH.	27.34	28.19	29.14	29.45	29.66	30.13	1.96
52. SERVICE INDUSTRY MACHINES	30.71	31.92	32.44	33.98	34.06	34.07	2.10
53. ELECTRICAL MACHINERY	41.66	42.32	44.17	45.12	45.56	45.83	1.93
54. HOUSEHOLD APPLIANCES	41.22	42.35	43.50	44.98	45.96	46.59	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	40.39	40.66	41.76	42.76	43.40	43.94	1.70
56. RADIO,TV. & COMMUNICATION EQ.	63.53	64.53	66.06	66.72	66.85	67.49	1.22

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
126. ASSEMBLERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
57. ELECTRONIC COMPONENTS & ACCESS.	87.43	90.97	95.28	98.93	101.54	103.47	3.43
58. MISC. ELECTRICAL MACH. & EQ.	43.72	45.24	47.04	47.58	48.18	48.56	2.12
59. MOTOR VEHICLES & EQUIPMENT	188.07	196.61	203.28	206.54	208.81	209.98	2.23
60. AIRCRAFT & PARTS	18.11	18.75	19.17	19.68	19.64	19.53	1.52
61. OTHER TRANSPORTATION EQ.	11.39	11.77	12.23	12.53	12.60	12.75	2.29
62. INSTRUMENTS & SUPPLIES	56.98	57.92	60.16	62.44	64.03	65.04	2.68
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	17.59	17.83	18.58	19.39	20.02	20.52	3.13
64. MISC. MANUFACTURING	54.39	55.48	57.54	59.43	60.63	61.33	2.43
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	4.02	4.15	4.30	4.42	4.50	4.55	2.49
82. GOVERNMENT INDUSTRY	0.43	0.43	0.44	0.45	0.46	0.47	1.93
TOTAL, ALL INDUSTRIES	1,121.73	1,158.16	1,200.92	1,233.42	1,254.14	1,268.41	2.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
127. METALWORKING OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GRDTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.61
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.76
5. IRON ORE MINING	0.09	0.10	0.11	0.12	0.12	0.12	7.84
6. NONFERROUS METAL MINING	0.07	0.09	0.10	0.11	0.12	0.13	11.42
7. COAL MINING	0.18	0.21	0.23	0.25	0.27	0.29	9.54
8. CRUDE PETROLEUM & N. GAS	0.25	0.26	0.27	0.29	0.30	0.30	4.12
9. STONE&CLAY MINING & QUARRYING	0.06	0.07	0.08	0.09	0.10	0.10	10.10
10. CHEM&FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.90
11. NEW CONSTRUCTION	1.18	1.33	1.43	1.58	1.70	1.79	8.71
13. DRDNANCE & ACCESSORIES	11.55	13.11	14.35	15.56	16.48	17.16	8.25
20. LUMBER & WOOD PRODUCTS	0.04	0.04	0.05	0.05	0.06	0.06	11.01
22. HOUSEHOLD FURNITURE	0.04	0.04	0.04	0.04	0.04	0.04	3.70
23. OTHER FURNITURE & FIXTURES	0.28	0.29	0.30	0.32	0.34	0.35	4.81
24. PAPER & ALLIED PRODUCTS	0.05	0.05	0.06	0.06	0.06	0.06	6.63
25. PAPERBOARD CONTAINERS & BOXES	0.02	0.02	0.02	0.02	0.03	0.03	8.78
27. CHEMICALS & PRODUCTS	0.14	0.16	0.17	0.19	0.20	0.21	7.99
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.02	0.02	0.02	0.02	8.72
31. PET REFINING & REL. PROD.	0.09	0.10	0.10	0.11	0.12	0.12	5.17
32. RUBBER & MISC. PLASTICS PROD.	0.02	0.02	0.03	0.03	0.03	0.04	10.12
35. GLASS & GLASS PRODUCTS	0.03	0.03	0.04	0.04	0.05	0.05	11.76
36. STONE & CLAY PRODUCTS	0.23	0.26	0.28	0.31	0.33	0.34	8.32
37. PRIMARY FERROUS METALS	4.08	4.54	4.92	5.38	5.74	6.00	8.03
38. NONFERROUS METALS	3.25	3.71	4.06	4.46	4.78	4.98	8.92
39. METAL CONTAINERS	0.08	0.08	0.09	0.10	0.10	0.11	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	5.71	6.42	6.85	7.37	7.81	8.23	7.58
41. SCREW MACHINE PROD.&STAMPINGS	5.37	5.99	6.42	6.99	7.40	7.69	7.44
42. OTHER FAB. METAL PRODUCTS	3.27	3.74	4.09	4.54	4.91	5.18	9.69
43. ENGINES & TURBINES	1.35	1.52	1.67	1.77	1.87	1.95	7.72
44. FARM & GARDEN MACHINERY	0.08	0.09	0.09	0.10	0.11	0.11	8.11
45. CONSTR. & MINING MACHINERY	0.71	0.80	0.86	0.93	0.98	1.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	1.23	1.41	1.53	1.69	1.82	1.90	9.12
47. METALWORKING MACH. & EQ.	4.54	5.21	5.72	6.33	6.80	7.10	9.36
48. SPECIAL INDUSTRY MACHINERY	0.21	0.25	0.27	0.32	0.35	0.38	12.06
49. GENERAL INDUSTRY MACHINERY	2.60	2.91	3.13	3.37	3.58	3.73	7.51
50. MISC. NONELECTRICAL MACH.	9.76	10.62	11.68	12.82	13.64	14.07	7.60
51. OFFICE, COMPUTING & ACCT. MACH.	0.44	0.50	0.55	0.59	0.61	0.63	7.32
52. SERVICE INDUSTRY MACHINES	0.48	0.56	0.62	0.71	0.80	0.90	13.37

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
127. METALWORKING OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG, ANN % GROWTH 82 TO 87
53. ELECTRICAL MACHINERY	1.58	1.81	1.98	2.18	2.34	2.45	9.10
54. HOUSEHOLD APPLIANCES	0.03	0.04	0.04	0.04	0.05	0.05	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.77	0.87	0.93	1.02	1.10	1.14	8.25
56. RADIO, TV, & COMMUNICATION EQ.	6.91	7.95	8.74	9.47	9.97	10.20	8.08
57. ELECTRONIC COMPONENTS & ACCESS.	4.88	5.80	6.54	7.31	7.97	8.36	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.30	0.34	0.37	0.41	0.44	0.47	9.57
59. MOTOR VEHICLES & EQUIPMENT	2.62	3.13	3.55	4.22	4.94	5.78	17.14
60. AIRCRAFT & PARTS	27.51	31.12	34.29	37.84	40.47	41.54	8.59
61. OTHER TRANSPORTATION EQ.	13.60	14.34	14.79	15.09	15.56	16.03	3.34
62. INSTRUMENTS & SUPPLIES	3.55	4.00	4.37	4.78	5.10	5.28	8.24
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.44	0.48	0.52	0.57	0.62	0.66	8.53
64. MISC. MANUFACTURING	0.21	0.23	0.24	0.26	0.27	0.28	5.90
65. TRANSPORTATION & WAREHOUSING	0.38	0.37	0.38	0.40	0.41	0.42	3.26
68. UTILITIES	0.14	0.15	0.16	0.17	0.18	0.18	6.05
69. WHOLESALE & RETAIL TRADE	0.07	0.08	0.09	0.10	0.11	0.11	9.19
72. PERSONAL SERVICES EXC. AUTO.	0.76	0.88	1.00	1.13	1.24	1.34	12.10
73. BUSINESS SERVICES	0.07	0.08	0.09	0.10	0.10	0.11	9.63
75. AUTOMOBILE REPAIR & SERVICE	0.10	0.12	0.12	0.13	0.14	0.15	6.79
77. MISC. SERVICES	0.02	0.02	0.02	0.02	0.02	0.02	2.54
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.73	4.06	4.34	4.62	4.79	4.87	5.47
82. GOVERNMENT INDUSTRY	6.76	6.63	6.77	6.97	7.09	7.15	1.14
TOTAL, ALL INDUSTRIES	131.92	147.11	159.83	173.54	184.67	191.84	7.78
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	1.05	1.06	1.05	1.03	1.02	1.01	-0.80
2. OTHER AGRICULTURAL PRODUCTS	7.62	7.65	7.68	7.65	7.64	7.63	0.02
5. IRON ORE MINING	1.68	1.80	1.92	1.90	1.86	1.82	1.68
6. NONFERROUS METAL MINING	1.27	1.35	1.41	1.45	1.45	1.46	2.81
7. COAL MINING	6.46	6.83	7.12	7.33	7.60	7.79	3.82
8. CRUDE PETROLEUM & N. GAS	3.36	3.35	3.34	3.28	3.23	3.25	-0.66
9. STONE & CLAY MINING & QUARRYING	2.03	2.07	2.14	2.24	2.29	2.31	2.69
10. CHEM & FERTILIZER MIN. MINING	0.44	0.45	0.47	0.48	0.48	0.48	2.00
11. NEW CONSTRUCTION	31.31	31.99	32.65	33.71	34.54	35.04	2.28
13. ORONANCE & ACCESSORIES	19.10	19.61	20.03	20.58	20.92	21.22	2.12
20. LUMBER & WOOD PRODUCTS	1.29	1.97	2.09	2.21	2.27	2.29	5.08
22. HOUSEHOLD FURNITURE	6.33	6.68	6.89	7.13	7.28	7.35	3.03
23. OTHER FURNITURE & FIXTURES	17.67	17.83	18.42	19.01	19.44	19.87	2.38
24. PAPER & ALLIED PRODUCTS	2.50	2.57	2.60	2.60	2.60	2.60	0.80

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
127. METALWORKING OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
25. PAPERBOARD CONTAINERS & BOXES	0.83	0.85	0.87	0.89	0.90	0.90	1.72
27. CHEMICALS & PRODUCTS	3.00	3.07	3.13	3.17	3.20	3.23	1.45
28. PLASTICS & SYNTHETIC MATLS.	0.54	0.56	0.58	0.59	0.60	0.60	2.32
31. PET REFINING & REL. PROD.	1.74	1.74	1.75	1.76	1.77	1.78	0.23
32. RUBBER & MISC. PLASTICS PROD.	0.80	0.83	0.86	0.89	0.91	0.92	2.70
35. GLASS & GLASS PRODUCTS	1.28	1.33	1.39	1.43	1.46	1.47	2.87
36. STONE & CLAY PRODUCTS	7.10	7.24	7.37	7.55	7.58	7.49	1.08
37. PRIMARY FERROUS METALS	57.20	59.06	61.03	61.90	62.23	62.08	1.85
38. NONFERROUS METALS	38.40	39.87	41.12	42.17	42.89	43.13	2.35
39. METAL CONTAINERS	5.28	5.20	5.21	5.31	5.34	5.37	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	127.91	128.15	131.23	135.56	138.39	140.18	1.85
41. SCREW MACHINE PROD.&STAMPINGS	87.54	91.76	94.49	95.88	96.13	96.29	1.92
42. OTHER FAB. METAL PRODUCTS	71.00	73.17	76.36	78.72	80.45	82.26	2.99
43. ENGINES & TURBINES	18.19	18.71	17.33	17.52	17.81	17.68	1.78
44. FARM & GARDEN MACHINERY	23.54	24.18	25.41	25.76	26.05	26.34	2.27
45. CONSTR. & MINING MACHINERY	60.37	63.82	67.16	69.54	71.40	72.20	3.84
46. MATERIALS HANDLING MACH. & EQ.	21.58	22.27	23.62	24.59	25.28	25.79	3.82
47. METALWORKING MACH. & EQ.	88.18	91.78	97.21	101.18	104.08	106.04	3.78
48. SPECIAL INDUSTRY MACHINERY	29.82	30.25	31.78	33.18	34.00	34.71	3.22
49. GENERAL INDUSTRY MACHINERY	59.18	60.63	63.48	65.18	66.27	67.33	2.82
50. MISC. NONELECTRICAL MACH.	85.20	87.48	91.23	93.35	94.26	95.42	2.29
51. OFFICE, COMPUTING & ACCT. MACH.	11.87	12.14	12.85	12.88	13.06	13.35	2.72
52. SERVICE INDUSTRY MACHINES	28.59	27.84	28.98	29.43	29.50	29.51	2.10
53. ELECTRICAL MACHINERY	31.81	32.38	33.82	34.59	34.98	35.21	2.08
54. HOUSEHOLD APPLIANCES	13.19	13.55	13.92	14.39	14.70	14.91	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	18.12	18.22	18.66	17.08	17.32	17.53	1.70
56. RADIO, TV, & COMMUNICATION EQ.	18.37	18.75	17.27	17.57	17.72	18.01	1.93
57. ELECTRONIC COMPONENTS & ACCESS.	22.27	23.22	24.37	25.38	26.09	26.63	3.85
58. MISC. ELECTRICAL MACH. & EQ.	10.91	11.28	11.73	11.87	12.02	12.11	2.12
59. MOTOR VEHICLES & EQUIPMENT	135.39	141.54	148.34	148.69	150.32	151.17	2.23
60. AIRCRAFT & PARTS	55.11	57.31	58.88	60.73	60.87	60.83	2.00
61. OTHER TRANSPORTATION EQ.	48.95	48.33	50.03	51.11	51.22	51.85	1.93
62. INSTRUMENTS & SUPPLIES	30.52	31.05	32.28	33.54	34.43	35.00	2.78
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	10.05	10.19	10.62	11.09	11.45	11.74	3.17
64. MISC. MANUFACTURING	18.71	18.98	19.57	20.10	20.39	20.53	1.87
65. TRANSPORTATION & WAREHOUSING	8.38	8.48	8.54	8.65	8.81	8.52	0.37
68. UTILITIES	8.40	8.41	8.42	8.42	8.43	8.43	0.10
69. WHOLESALE & RETAIL TRADE	11.81	12.14	12.47	12.74	12.94	13.15	2.18
72. PERSONAL SERVICES EXC. AUTO.	41.29	43.80	46.10	48.62	51.18	53.58	5.35

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
127. METALWORKING OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
73. BUSINESS SERVICES	1.41	1.47	1.54	1.61	1.68	1.74	4.18
75. AUTOMOBILE REPAIR & SERVICE	7.21	7.31	7.34	7.35	7.36	7.39	0.51
77. MISC. SERVICES	2.73	2.73	2.73	2.75	2.78	2.82	0.61
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	39.50	40.71	42.23	43.35	44.05	44.58	2.45
82. GOVERNMENT INDUSTRY	18.26	18.19	18.32	18.59	18.87	19.12	0.92
TOTAL, ALL INDUSTRIES	1,473.80	1,518.64	1,575.36	1,617.30	1,643.33	1,663.01	2.45

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
128. DRILL PRESS&BORING MACH. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.09	1.23	1.35	1.46	1.54	1.60	8.03
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.73
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.34
37. PRIMARY FERROUS METALS	0.09	0.10	0.11	0.12	0.13	0.13	8.57
38. NONFERROUS METALS	0.18	0.20	0.22	0.24	0.26	0.27	8.53
40. FAB. STRUCTURAL METAL PRODUCTS	0.39	0.44	0.47	0.51	0.54	0.58	8.09
41. SCREW MACHINE PROD.&STAMPINGS	0.35	0.39	0.42	0.46	0.49	0.51	7.76
42. OTHER FAB. METAL PRODUCTS	0.24	0.27	0.30	0.34	0.36	0.39	10.04
43. ENGINES & TURBINES	0.31	0.35	0.38	0.41	0.43	0.45	7.72
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.11
45. CONSTR. & MINING MACHINERY	0.07	0.07	0.08	0.09	0.09	0.10	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.13	0.14	0.16	0.17	0.18	9.12
47. METALWORKING MACH. & EQ.	0.48	0.55	0.60	0.67	0.72	0.75	9.36
48. SPECIAL INDUSTRY MACHINERY	0.03	0.03	0.04	0.04	0.05	0.05	12.06
49. GENERAL INDUSTRY MACHINERY	0.30	0.33	0.38	0.38	0.41	0.42	7.51
50. MISC. NONELECTRICAL MACH.	0.89	0.96	1.08	1.16	1.24	1.27	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.06	0.06	0.07	0.07	0.08	0.08	7.32
52. SERVICE INDUSTRY MACHINES	0.05	0.06	0.06	0.07	0.08	0.09	13.37
53. ELECTRICAL MACHINERY	0.20	0.23	0.25	0.28	0.30	0.31	9.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.08	0.09	0.10	0.10	0.11	0.12	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.82	0.95	1.04	1.13	1.19	1.22	8.15
57. ELECTRONIC COMPONENTS & ACCESS.	0.38	0.48	0.51	0.58	0.63	0.66	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.03	0.03	0.03	0.03	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.21	0.25	0.29	0.34	0.40	0.47	17.14
60. AIRCRAFT & PARTS	2.78	3.12	3.44	3.80	4.06	4.17	8.59
61. OTHER TRANSPORTATION EQ.	0.42	0.44	0.48	0.47	0.48	0.49	3.18
62. INSTRUMENTS & SUPPLIES	0.53	0.60	0.66	0.72	0.76	0.79	8.25
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.05	0.05	0.06	0.06	0.07	0.07	8.55
64. MISC. MANUFACTURING	0.01	0.02	0.02	0.02	0.02	0.02	5.95
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.03	0.03	0.03	0.03	0.03	5.80
TOTAL. ALL INDUSTRIES	10.17	11.49	12.58	13.77	14.71	15.29	8.50
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.80	1.84	1.88	1.93	1.96	1.98	1.91
23. OTHER FURNITURE & FIXTURES	0.58	0.59	0.61	0.63	0.64	0.66	2.30
36. STONE & CLAY PRODUCTS	0.31	0.32	0.32	0.33	0.33	0.33	1.10

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
128. DRILL PRESS&BORING MACH. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
37. PRIMARY FERROUS METALS	1.22	1.27	1.32	1.34	1.36	1.36	2.15
38. NONFERROUS METALS	2.09	2.15	2.22	2.27	2.29	2.30	1.99
40. FAB. STRUCTURAL METAL PRODUCTS	8.74	8.80	9.05	9.40	9.64	9.81	2.33
41. SCREW MACHINE PROD.&STAMPINGS	5.71	6.00	6.20	6.31	6.35	6.37	2.23
42. OTHER FAB. METAL PRODUCTS	5.20	5.38	5.63	5.83	5.97	6.12	3.32
43. ENGINES & TURBINES	3.71	3.82	3.97	4.01	4.03	4.05	1.78
44. FARM & GARDEN MACHINERY	2.65	2.72	2.86	2.90	2.94	2.97	2.27
45. CONSTR. & MINING MACHINERY	5.66	5.99	6.30	6.52	6.70	6.77	3.64
46. MATERIALS HANDLING MACH. & EQ.	2.02	2.09	2.22	2.31	2.37	2.42	3.62
47. METALWORKING MACH. & EQ.	9.29	9.68	10.24	10.65	10.96	11.17	3.76
48. SPECIAL INDUSTRY MACHINERY	3.84	3.93	4.12	4.31	4.41	4.50	3.22
49. GENERAL INDUSTRY MACHINERY	6.74	6.90	7.23	7.42	7.55	7.67	2.62
50. MISC. NONELECTRICAL MACH.	7.74	7.94	8.27	8.46	8.54	8.64	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.49	1.55	1.62	1.65	1.67	1.71	2.72
52. SERVICE INDUSTRY MACHINES	2.64	2.74	2.87	2.92	2.93	2.93	2.10
53. ELECTRICAL MACHINERY	4.07	4.14	4.33	4.43	4.48	4.51	2.11
55. ELECTRIC LIGHTING & WIRING EQ.	1.65	1.66	1.71	1.75	1.77	1.80	1.70
56. RADIO, TV, & COMMUNICATION EQ.	1.95	1.99	2.08	2.09	2.11	2.15	2.00
57. ELECTRONIC COMPONENTS & ACCESS.	1.75	1.83	1.92	2.00	2.05	2.10	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.78	0.81	0.84	0.85	0.86	0.87	2.13
59. MOTOR VEHICLES & EQUIPMENT	11.04	11.54	11.93	12.12	12.26	12.32	2.23
60. AIRCRAFT & PARTS	5.53	5.75	5.91	6.09	6.11	6.10	2.00
61. OTHER TRANSPORTATION EQ.	1.46	1.50	1.55	1.58	1.58	1.59	1.77
62. INSTRUMENTS & SUPPLIES	4.58	4.66	4.84	5.03	5.17	5.25	2.79
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.13	1.15	1.20	1.25	1.29	1.33	3.18
64. MISC. MANUFACTURING	1.29	1.31	1.35	1.39	1.41	1.42	1.92
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.23	0.23	0.24	0.25	0.25	0.26	2.59
TOTAL, ALL INDUSTRIES	108.06	111.49	116.06	119.31	121.29	122.79	2.59

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION,  
129. ELECTROPLATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.08	0.09	0.10	0.11	0.11	0.12	7.31
37. PRIMARY FERROUS METALS	0.03	0.04	0.04	0.04	0.05	0.05	6.91
38. NONFERROUS METALS	0.08	0.09	0.10	0.11	0.11	0.12	9.45
40. FAB. STRUCTURAL METAL PRODUCTS	0.05	0.06	0.08	0.06	0.07	0.07	8.64
41. SCREW MACHINE PROD.&STAMPINGS	0.06	0.07	0.07	0.08	0.08	0.09	7.73
42. OTHER FAB. METAL PRODUCTS	0.62	0.70	0.76	0.83	0.89	0.94	8.75
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.80
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.35
50. MISC. NONELECTRICAL MACH.	0.05	0.05	0.06	0.06	0.07	0.07	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.02	0.03	0.03	0.03	0.03	0.03	7.33
53. ELECTRICAL MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	8.88
55. ELECTRIC LIGHTING & WIRING EQ.	0.06	0.07	0.07	0.08	0.09	0.09	8.25
58. RADIO, TV, & COMMUNICATION EQ.	0.49	0.58	0.82	0.67	0.70	0.72	8.07
57. ELECTRONIC COMPONENTS & ACCESS.	1.30	1.54	1.74	1.94	2.12	2.22	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.02	0.02	0.02	0.02	0.03	0.03	17.13
60. AIRCRAFT & PARTS	0.67	0.75	0.83	0.92	0.98	1.00	8.60
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.04	4.32
62. INSTRUMENTS & SUPPLIES	0.08	0.09	0.10	0.10	0.11	0.11	8.15
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.55
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.02	0.02	0.02	8.59
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.05	0.05	0.06	0.06	0.06	0.06	5.08
82. GOVERNMENT INDUSTRY	0.93	0.91	0.93	0.95	0.96	0.97	0.84
TOTAL, ALL INDUSTRIES	4.67	5.23	5.69	6.21	6.82	6.85	7.94
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.13	0.14	0.14	0.14	0.14	0.14	1.24
37. PRIMARY FERROUS METALS	0.47	0.48	0.49	0.49	0.49	0.48	0.60
38. NONFERROUS METALS	0.90	0.94	0.98	1.01	1.03	1.04	2.85
40. FAB. STRUCTURAL METAL PRODUCTS	1.09	1.10	1.14	1.19	1.23	1.25	2.85
41. SCREW MACHINE PROD.&STAMPINGS	0.97	1.02	1.05	1.07	1.08	1.08	2.20
42. OTHER FAB. METAL PRODUCTS	13.38	13.66	14.13	14.44	14.64	14.85	2.11
43. ENGINES & TURBINES	0.07	0.07	0.08	0.08	0.08	0.08	1.86
47. METALWORKING MACH. & EQ.	0.22	0.22	0.24	0.25	0.25	0.26	3.75
50. MISC. NONELECTRICAL MACH.	0.43	0.44	0.46	0.47	0.47	0.48	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	0.64	0.66	0.69	0.70	0.71	0.73	2.73

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
129. ELECTROPLATORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
53. ELECTRICAL MACHINERY	0.35	0.36	0.37	0.38	0.38	0.38	1.84
55. ELECTRIC LIGHTING & WIRING EQ.	1.29	1.30	1.33	1.38	1.38	1.40	1.70
56. RADIO, TV, & COMMUNICATION EQ.	1.16	1.18	1.22	1.24	1.25	1.27	1.92
57. ELECTRONIC COMPONENTS & ACCESS.	5.92	6.17	6.48	6.74	6.94	7.08	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.22	0.22	0.23	0.23	0.24	0.24	2.13
59. MOTOR VEHICLES & EQUIPMENT	0.78	0.81	0.84	0.85	0.86	0.87	2.22
60. AIRCRAFT & PARTS	1.33	1.39	1.42	1.47	1.47	1.47	2.00
61. OTHER TRANSPORTATION EQ.	0.10	0.10	0.11	0.11	0.11	0.11	2.89
62. INSTRUMENTS & SUPPLIES	0.67	0.68	0.70	0.73	0.75	0.76	2.70
63. OPTICAL, OPHTHALMIC & PHOTO EQ	0.20	0.20	0.21	0.22	0.23	0.23	3.18
64. MISC. MANUFACTURING	1.10	1.15	1.22	1.28	1.33	1.37	4.46
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.34	0.35	0.37	0.38	0.38	0.39	2.47
82. GOVERNMENT INDUSTRY	1.67	1.67	1.68	1.72	1.75	1.77	1.11
TOTAL, ALL INDUSTRIES	34.35	35.28	36.57	37.58	38.23	38.80	2.47

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
130. GRINDING&ABRAIDING MACH. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.99	1.12	1.23	1.33	1.40	1.46	7.98
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.02	0.02	4.64
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	8.28
37. PRIMARY FERROUS METALS	0.48	0.53	0.58	0.64	0.69	0.73	8.82
38. NONFERROUS METALS	0.29	0.33	0.36	0.39	0.42	0.43	8.62
40. FAB. STRUCTURAL METAL PRODUCTS	0.36	0.41	0.44	0.47	0.50	0.53	8.21
41. SCREW MACHINE PROD.&STAMPINGS	0.23	0.25	0.27	0.30	0.32	0.33	7.73
42. OTHER FAB. METAL PRODUCTS	0.35	0.40	0.44	0.48	0.52	0.54	9.19
43. ENGINES & TURBINES	0.18	0.20	0.22	0.23	0.25	0.26	7.72
45. CONSTR. & MINING MACHINERY	0.03	0.03	0.04	0.04	0.04	0.04	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.05	0.06	0.06	0.07	0.08	0.08	9.12
47. METALWORKING MACH. & EQ.	0.84	0.97	1.06	1.17	1.26	1.32	9.36
48. SPECIAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	12.06
49. GENERAL INDUSTRY MACHINERY	0.36	0.40	0.44	0.47	0.50	0.52	7.51
50. MISC. NONELECTRICAL MACH.	1.19	1.30	1.42	1.56	1.66	1.71	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.03	0.03	0.04	0.04	0.04	0.04	7.33
52. SERVICE INDUSTRY MACHINES	0.02	0.03	0.03	0.04	0.04	0.05	13.38
53. ELECTRICAL MACHINERY	0.09	0.10	0.11	0.13	0.14	0.14	9.23
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.07	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.35	0.40	0.44	0.48	0.51	0.52	8.02
57. ELECTRONIC COMPONENTS & ACCESS.	0.26	0.31	0.34	0.38	0.42	0.44	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.60
59. MOTOR VEHICLES & EQUIPMENT	0.21	0.25	0.29	0.34	0.40	0.47	17.14
60. AIRCRAFT & PARTS	3.35	3.79	4.17	4.60	4.92	5.06	8.59
61. OTHER TRANSPORTATION EQ.	0.18	0.19	0.19	0.20	0.20	0.21	3.10
62. INSTRUMENTS & SUPPLIES	0.28	0.31	0.34	0.38	0.40	0.42	8.49
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.04	0.05	0.05	0.05	0.06	0.06	8.50
64. MISC. MANUFACTURING	0.06	0.06	0.06	0.07	0.07	0.07	5.13
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.29	0.31	0.34	0.36	0.38	0.38	6.01
TOTAL, ALL INDUSTRIES	10.60	11.96	13.09	14.37	15.36	15.96	8.53
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.64	1.68	1.71	1.75	1.78	1.80	1.87
23. OTHER FURNITURE & FIXTURES	0.82	0.83	0.85	0.88	0.90	0.92	2.22
36. STONE & CLAY PRODUCTS	0.33	0.34	0.34	0.35	0.35	0.35	1.05
37. PRIMARY FERROUS METALS	6.67	6.95	7.23	7.39	7.48	7.51	2.40

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
130. GRINDING&ABRADING MACH. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
38. NONFERROUS METALS	3.39	3.49	3.61	3.69	3.73	3.75	2.07
40. FAB. STRUCTURAL METAL PRODUCTS	8.04	8.10	8.35	8.68	8.91	9.07	2.44
41. SCREW MACHINE PROD.&STAMPINGS	3.71	3.90	4.03	4.10	4.12	4.14	2.20
42. OTHER FAB. METAL PRODUCTS	7.63	7.83	8.13	8.35	8.49	8.65	2.52
43. ENGINES & TURBINES	2.13	2.19	2.28	2.30	2.31	2.32	1.78
45. CONSTR. & MINING MACHINERY	2.55	2.69	2.83	2.94	3.01	3.05	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.91	0.94	1.00	1.04	1.07	1.09	3.62
47. METALWORKING MACH. & EQ.	16.34	17.00	18.01	18.74	19.28	19.65	3.76
48. SPECIAL INDUSTRY MACHINERY	2.29	2.34	2.46	2.57	2.63	2.69	3.22
49. GENERAL INDUSTRY MACHINERY	8.22	8.42	8.82	9.05	9.21	9.35	2.62
50. MISC. NONELECTRICAL MACH.	10.40	10.67	11.12	11.37	11.47	11.61	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	0.77	0.81	0.84	0.85	0.87	0.89	2.73
52. SERVICE INDUSTRY MACHINES	1.37	1.43	1.49	1.52	1.52	1.52	2.11
53. ELECTRICAL MACHINERY	1.84	1.87	1.96	2.01	2.03	2.05	2.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.94	0.94	0.97	0.99	1.01	1.02	1.70
56. RADIO, TV, & COMMUNICATION EQ.	0.83	0.85	0.88	0.89	0.90	0.91	1.88
57. ELECTRONIC COMPONENTS & ACCESS.	1.17	1.22	1.28	1.33	1.37	1.40	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.29	0.30	0.31	0.31	0.32	0.32	2.14
59. MOTOR VEHICLES & EQUIPMENT	11.05	11.55	11.94	12.13	12.26	12.33	2.23
60. AIRCRAFT & PARTS	6.71	6.97	7.16	7.39	7.41	7.40	2.00
61. OTHER TRANSPORTATION EQ.	0.61	0.63	0.65	0.66	0.66	0.67	1.69
62. INSTRUMENTS & SUPPLIES	2.39	2.44	2.55	2.65	2.73	2.78	3.01
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.95	0.96	1.00	1.04	1.08	1.11	3.14
64. MISC. MANUFACTURING	5.01	5.04	5.16	5.27	5.30	5.30	1.13
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.86	2.95	3.07	3.16	3.21	3.25	2.55
TOTAL, ALL INDUSTRIES	114.15	117.71	122.49	125.92	127.97	129.47	2.55

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
131. HEATERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
<hr/>							
DEFENSE INDUCED EMPLOYMENT							
37. PRIMARY FERROUS METALS	0.12	0.13	0.14	0.15	0.16	0.17	7.36
38. NONFERROUS METALS	0.06	0.06	0.07	0.08	0.08	0.09	9.11
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	8.12
41. SCREW MACHINE PROD.&STAMPINGS	0.07	0.08	0.09	0.09	0.10	0.10	7.69
42. OTHER FAB. METAL PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	10.12
56. RADIO, TV, & COMMUNICATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	7.21
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.02	0.02	17.14
60. AIRCRAFT & PARTS	0.19	0.21	0.24	0.26	0.28	0.29	8.60
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.03	2.67
TOTAL, ALL INDUSTRIES	0.53	0.60	0.65	0.71	0.76	0.78	8.11
TOTAL EMPLOYMENT							
37. PRIMARY FERROUS METALS	1.66	1.71	1.75	1.77	1.77	1.75	1.02
38. NONFERROUS METALS	0.66	0.69	0.71	0.73	0.74	0.75	2.53
40. FAB. STRUCTURAL METAL PRODUCTS	0.27	0.27	0.28	0.29	0.30	0.30	2.36
41. SCREW MACHINE PROD.&STAMPINGS	1.18	1.24	1.28	1.30	1.31	1.31	2.16
42. OTHER FAB. METAL PRODUCTS	0.24	0.25	0.26	0.27	0.28	0.29	3.40
56. RADIO, TV, & COMMUNICATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	1.11
59. MOTOR VEHICLES & EQUIPMENT	0.44	0.46	0.48	0.49	0.49	0.49	2.23
60. AIRCRAFT & PARTS	0.38	0.39	0.40	0.42	0.42	0.42	2.00
61. OTHER TRANSPORTATION EQ.	0.11	0.11	0.11	0.11	0.11	0.11	1.27
TOTAL, ALL INDUSTRIES	5.57	5.76	5.95	6.07	6.11	6.14	1.96

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMOOITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
132. LATHE MACHINE OPERATORS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.09	1.23	1.34	1.45	1.52	1.58	7.75
36. STONE & CLAY PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	8.21
37. PRIMARY FERROUS METALS	0.19	0.21	0.23	0.25	0.27	0.28	7.65
38. NONFERROUS METALS	0.13	0.15	0.16	0.18	0.19	0.20	8.94
40. FAB. STRUCTURAL METAL PRODUCTS	0.27	0.31	0.33	0.36	0.39	0.41	8.48
41. SCREW MACHINE PROD.&STAMPINGS	0.71	0.79	0.85	0.93	0.99	1.03	7.77
42. OTHER FAB. METAL PRODUCTS	0.39	0.45	0.50	0.56	0.61	0.65	10.44
43. ENGINES & TURBINES	0.17	0.20	0.22	0.23	0.24	0.25	7.72
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.11
45. CONSTR. & MINING MACHINERY	0.07	0.08	0.08	0.09	0.10	0.10	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.14	0.15	0.16	0.18	0.18	9.12
47. METALWORKING MACH. & EQ.	0.70	0.80	0.88	0.98	1.05	1.10	9.36
48. SPECIAL INDUSTRY MACHINERY	0.04	0.04	0.05	0.05	0.06	0.06	12.06
49. GENERAL INDUSTRY MACHINERY	0.60	0.68	0.73	0.79	0.83	0.87	7.51
50. MISC. NONELECTRICAL MACH.	1.81	1.98	2.18	2.40	2.56	2.65	7.89
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.05	0.05	0.05	0.06	0.06	7.32
52. SERVICE INDUSTRY MACHINES	0.03	0.03	0.03	0.04	0.04	0.05	13.37
53. ELECTRICAL MACHINERY	0.22	0.25	0.27	0.30	0.32	0.34	9.24
55. ELECTRIC LIGHTING & WIRING EQ.	0.09	0.11	0.11	0.12	0.13	0.14	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.51	0.59	0.65	0.71	0.74	0.76	8.13
57. ELECTRONIC COMPONENTS & ACCESS.	0.24	0.29	0.33	0.37	0.40	0.42	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.03	0.03	0.03	0.03	0.04	9.56
59. MOTOR VEHICLES & EQUIPMENT	0.17	0.20	0.23	0.27	0.32	0.37	17.14
60. AIRCRAFT & PARTS	5.12	5.79	6.38	7.04	7.53	7.73	8.59
61. OTHER TRANSPORTATION EQ.	0.40	0.43	0.44	0.45	0.46	0.47	3.21
62. INSTRUMENTS & SUPPLIES	0.60	0.68	0.74	0.81	0.86	0.89	8.09
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.06	0.06	0.07	0.08	0.08	0.09	8.57
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	5.86
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.06	0.07	0.07	0.08	0.08	0.08	5.83
TOTAL, ALL INDUSTRIES	13.92	15.67	17.16	18.82	20.11	20.85	8.42
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.80	1.84	1.87	1.91	1.93	1.95	1.65
36. STONE & CLAY PRODUCTS	0.62	0.63	0.64	0.65	0.66	0.65	0.98
37. PRIMARY FERROUS METALS	2.70	2.78	2.86	2.89	2.89	2.88	1.29
38. NONFERROUS METALS	1.54	1.59	1.65	1.69	1.72	1.73	2.37

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
132. LATHE MACHINE OPERATORS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
40. FAB. STRUCTURAL METAL PRODUCTS	6.14	6.21	6.42	6.68	6.88	7.02	2.70
41. SCREW MACHINE PROD.&STAMPINGS	11.56	12.16	12.56	12.79	12.86	12.92	2.23
42. OTHER FAB. METAL PRODUCTS	8.57	8.90	9.36	9.71	9.99	10.28	3.70
43. ENGINES & TURBINES	2.09	2.16	2.24	2.26	2.27	2.28	1.78
44. FARM & GARDEN MACHINERY	2.31	2.37	2.49	2.53	2.56	2.58	2.27
45. CONSTR. & MINING MACHINERY	5.88	6.21	6.54	6.77	6.95	7.03	3.64
46. MATERIALS HANDLING MACH. & EQ.	2.10	2.17	2.30	2.39	2.46	2.51	3.62
47. METALWORKING MACH. & EQ.	13.61	14.17	15.01	15.62	16.07	16.37	3.76
48. SPECIAL INDUSTRY MACHINERY	5.07	5.18	5.44	5.68	5.82	5.94	3.22
49. GENERAL INDUSTRY MACHINERY	13.78	14.12	14.78	15.18	15.43	15.68	2.62
50. MISC. NONELECTRICAL MACH.	15.81	16.28	17.02	17.47	17.68	17.94	2.56
51. OFFICE, COMPUTING & ACCT. MACH.	1.06	1.10	1.15	1.17	1.18	1.21	2.72
52. SERVICE INDUSTRY MACHINES	1.46	1.52	1.59	1.62	1.62	1.62	2.11
53. ELECTRICAL MACHINERY	4.38	4.47	4.67	4.79	4.84	4.88	2.18
55. ELECTRIC LIGHTING & WIRING EQ.	1.96	1.97	2.03	2.08	2.11	2.13	1.70
56. RADIO, TV, & COMMUNICATION EQ.	1.22	1.25	1.29	1.31	1.32	1.34	1.98
57. ELECTRONIC COMPONENTS & ACCESS.	1.12	1.16	1.22	1.27	1.31	1.33	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.84	0.87	0.90	0.91	0.92	0.93	2.11
59. MOTOR VEHICLES & EQUIPMENT	8.79	9.19	9.50	9.65	9.76	9.81	2.23
60. AIRCRAFT & PARTS	10.25	10.66	10.95	11.30	11.32	11.31	2.00
61. OTHER TRANSPORTATION EQ.	1.40	1.44	1.48	1.51	1.52	1.53	1.80
62. INSTRUMENTS & SUPPLIES	5.19	5.27	5.47	5.68	5.82	5.91	2.64
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.32	1.34	1.40	1.46	1.51	1.55	3.20
64. MISC. MANUFACTURING	0.69	0.70	0.72	0.74	0.75	0.75	1.83
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.56	0.58	0.60	0.62	0.63	0.64	2.68
TOTAL, ALL INDUSTRIES	134.35	138.82	144.72	148.90	151.38	153.33	2.68

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
133. MACHINE TOOL OPERATORS, COMB.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.84	0.95	1.04	1.12	1.18	1.23	7.81
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.66
36. STONE & CLAY PRODUCTS	0.04	0.04	0.04	0.05	0.05	0.05	8.32
37. PRIMARY FERROUS METALS	0.14	0.15	0.17	0.18	0.19	0.20	8.11
38. NONFERROUS METALS	0.15	0.17	0.19	0.21	0.22	0.23	8.69
40. FAB. STRUCTURAL METAL PRODUCTS	0.32	0.36	0.38	0.41	0.43	0.46	7.68
41. SCREW MACHINE PROD.&STAMPINGS	0.63	0.70	0.76	0.84	0.89	0.93	8.34
42. OTHER FAB. METAL PRODUCTS	0.23	0.27	0.29	0.33	0.35	0.38	9.96
43. ENGINES & TURBINES	0.06	0.07	0.08	0.08	0.08	0.09	7.71
45. CONSTR. & MINING MACHINERY	0.06	0.07	0.07	0.08	0.08	0.08	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.10	0.12	0.13	0.14	0.15	0.16	9.12
47. METALWORKING MACH. & EQ.	0.82	0.95	1.04	1.15	1.23	1.29	9.36
48. SPECIAL INDUSTRY MACHINERY	0.03	0.04	0.04	0.05	0.05	0.05	12.06
49. GENERAL INDUSTRY MACHINERY	0.34	0.38	0.41	0.44	0.47	0.49	7.51
50. MISC. NONELECTRICAL MACH.	2.65	2.89	3.17	3.48	3.70	3.81	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.05	0.06	0.07	0.07	0.07	0.07	7.32
52. SERVICE INDUSTRY MACHINES	0.07	0.08	0.08	0.10	0.11	0.12	13.37
53. ELECTRICAL MACHINERY	0.15	0.18	0.19	0.21	0.23	0.24	9.27
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.06	0.07	0.08	0.09	0.09	0.10	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.59	1.83	2.01	2.18	2.29	2.34	8.02
57. ELECTRONIC COMPONENTS & ACCESS.	0.41	0.49	0.55	0.62	0.67	0.70	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.38	0.45	0.51	0.61	0.71	0.84	17.14
60. AIRCRAFT & PARTS	3.75	4.24	4.67	5.15	5.51	5.66	8.59
61. OTHER TRANSPORTATION EQ.	0.72	0.76	0.78	0.80	0.82	0.85	3.17
62. INSTRUMENTS & SUPPLIES	0.67	0.76	0.83	0.90	0.96	1.00	8.24
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.08	0.09	0.09	0.10	0.11	0.12	8.61
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.50
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.02	5.83
TOTAL, ALL INDUSTRIES	14.44	16.25	17.79	19.49	20.82	21.62	8.41
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.40	1.43	1.45	1.49	1.50	1.52	1.71
23. OTHER FURNITURE & FIXTURES	0.55	0.55	0.57	0.59	0.60	0.61	2.23
36. STONE & CLAY PRODUCTS	1.09	1.11	1.13	1.16	1.17	1.15	1.08



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
133. MACHINE TOOL OPERATORS, COMB.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
37. PRIMARY FERROUS METALS	1.93	2.00	2.06	2.09	2.11	2.10	1.72
38. NONFERROUS METALS	1.78	1.84	1.90	1.95	1.97	1.98	2.14
40. FAB. STRUCTURAL METAL PRODUCTS	7.10	7.12	7.30	7.54	7.71	7.81	1.94
41. SCREW MACHINE PROD. & STAMPINGS	10.20	10.79	11.21	11.47	11.60	11.70	2.78
42. OTHER FAB. METAL PRODUCTS	5.07	5.24	5.48	5.67	5.81	5.95	3.24
43. ENGINES & TURBINES	0.73	0.76	0.79	0.79	0.80	0.80	1.77
45. CONSTR. & MINING MACHINERY	5.05	5.33	5.61	5.81	5.97	6.03	3.64
46. MATERIALS HANDLING MACH. & EQ.	1.80	1.86	1.97	2.05	2.11	2.15	3.62
47. METALWORKING MACH. & EQ.	16.00	16.65	17.64	18.36	18.89	19.25	3.76
48. SPECIAL INDUSTRY MACHINERY	4.29	4.38	4.60	4.81	4.92	5.03	3.22
49. GENERAL INDUSTRY MACHINERY	7.81	8.00	8.38	8.60	8.74	8.88	2.62
50. MISC. NONELECTRICAL MACH.	23.17	23.77	24.78	25.34	25.57	25.87	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.39	1.45	1.51	1.54	1.56	1.59	2.72
52. SERVICE INDUSTRY MACHINES	3.61	3.75	3.93	4.00	4.01	4.01	2.10
53. ELECTRICAL MACHINERY	3.08	3.14	3.28	3.37	3.41	3.44	2.21
54. HOUSEHOLD APPLIANCES	2.16	2.21	2.27	2.35	2.40	2.44	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	1.35	1.35	1.39	1.42	1.45	1.46	1.70
56. RADIO, TV, & COMMUNICATION EQ.	3.77	3.86	3.98	4.04	4.08	4.14	1.88
57. ELECTRONIC COMPONENTS & ACCESS.	1.88	1.96	2.05	2.14	2.20	2.24	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.99	1.02	1.06	1.08	1.09	1.10	2.13
59. MOTOR VEHICLES & EQUIPMENT	19.59	20.48	21.16	21.51	21.75	21.87	2.23
60. AIRCRAFT & PARTS	7.50	7.80	8.02	8.27	8.29	8.28	2.00
61. OTHER TRANSPORTATION EQ.	2.50	2.57	2.65	2.71	2.71	2.73	1.76
62. INSTRUMENTS & SUPPLIES	5.77	5.87	6.11	6.34	6.51	6.62	2.78
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.82	1.85	1.93	2.02	2.09	2.14	3.24
64. MISC. MANUFACTURING	0.92	0.93	0.97	1.00	1.02	1.03	2.44
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.18	0.18	0.19	0.19	0.20	0.20	2.55
TOTAL, ALL INDUSTRIES	147.91	152.72	158.92	163.24	165.77	167.74	2.55

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MOOEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
134. MACHINE TOOL OPER. NUMER. CONTROL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORONANCE & ACCESSORIES	0.85	0.96	1.05	1.14	1.20	1.25	7.90
37. PRIMARY FERROUS METALS	0.03	0.03	0.03	0.04	0.04	0.04	7.67
38. NONFERROUS METALS	0.04	0.05	0.05	0.06	0.06	0.07	9.05
40. FAB. STRUCTURAL METAL PRODUCTS	0.07	0.08	0.08	0.09	0.09	0.10	7.86
41. SCREW MACHINE PROD.&STAMPINGS	0.04	0.04	0.05	0.05	0.05	0.06	7.76
42. OTHER FAB. METAL PRODUCTS	0.06	0.07	0.07	0.08	0.09	0.09	10.06
43. ENGINES & TURBINES	0.09	0.10	0.11	0.12	0.13	0.13	7.71
45. CONSTR. & MINING MACHINERY	0.03	0.03	0.03	0.04	0.04	0.04	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.05	0.06	0.06	0.07	0.07	0.08	9.12
47. METALWORKING MACH. & EQ.	0.36	0.41	0.45	0.50	0.53	0.56	9.36
48. SPECIAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.03	0.03	0.03	12.06
49. GENERAL INDUSTRY MACHINERY	0.15	0.17	0.18	0.20	0.21	0.22	7.51
50. MISC. NONELECTRICAL MACH.	0.62	0.68	0.74	0.82	0.87	0.90	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.04	0.05	0.05	0.05	0.05	7.32
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.02	13.37
53. ELECTRICAL MACHINERY	0.07	0.08	0.08	0.09	0.10	0.10	9.12
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.02	0.02	0.02	0.02	0.02	8.24
56. RADIO, TV, & COMMUNICATION EQ.	0.34	0.39	0.43	0.47	0.50	0.51	8.21
57. ELECTRONIC COMPONENTS & ACCESS.	0.59	0.70	0.79	0.89	0.97	1.01	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.02	0.02	9.56
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.02	0.02	0.02	0.03	0.03	17.15
60. AIRCRAFT & PARTS	1.94	2.20	2.42	2.68	2.86	2.94	8.59
61. OTHER TRANSPORTATION EQ.	0.15	0.16	0.16	0.17	0.17	0.17	3.03
62. INSTRUMENTS & SUPPLIES	0.18	0.20	0.22	0.24	0.25	0.26	8.10
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.03	0.04	0.04	0.04	0.05	8.54
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	7.40
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.01	0.01	0.01	5.69
TOTAL, ALL INDUSTRIES	5.82	6.59	7.24	7.94	8.47	8.77	8.55
TOTAL EMPLOYMENT							
13. ORONANCE & ACCESSORIES	1.41	1.44	1.47	1.50	1.52	1.54	1.79
37. PRIMARY FERROUS METALS	0.38	0.39	0.40	0.41	0.41	0.41	1.31
38. NONFERROUS METALS	0.51	0.52	0.54	0.56	0.57	0.57	2.47
40. FAB. STRUCTURAL METAL PRODUCTS	1.52	1.53	1.57	1.62	1.66	1.69	2.11
41. SCREW MACHINE PROD.&STAMPINGS	0.63	0.66	0.68	0.69	0.70	0.70	2.22
42. OTHER FAB. METAL PRODUCTS	1.26	1.31	1.37	1.42	1.45	1.49	3.34

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
134. MACHINE TOOL OPER. NUMER. CONTROL  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
43. ENGINES & TURBINES	1.10	1.13	1.17	1.19	1.19	1.20	1.77
45. CONSTR. & MINING MACHINERY	2.43	2.57	2.71	2.80	2.88	2.91	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.87	0.90	0.95	0.99	1.02	1.04	3.62
47. METALWORKING MACH. & EQ.	6.92	7.20	7.63	7.94	8.17	8.32	3.76
48. SPECIAL INDUSTRY MACHINERY	2.51	2.56	2.69	2.81	2.88	2.94	3.22
49. GENERAL INDUSTRY MACHINERY	3.49	3.58	3.74	3.84	3.91	3.97	2.62
50. MISC. NONELECTRICAL MACH.	5.44	5.58	5.82	5.95	6.00	6.07	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.01	1.05	1.09	1.11	1.13	1.16	2.72
52. SERVICE INDUSTRY MACHINES	0.49	0.51	0.53	0.54	0.54	0.54	2.11
53. ELECTRICAL MACHINERY	1.33	1.35	1.41	1.44	1.46	1.47	2.08
55. ELECTRIC LIGHTING & WIRING EQ.	0.30	0.30	0.31	0.31	0.32	0.32	1.70
56. RADIO, TV, & COMMUNICATION EQ.	0.81	0.83	0.86	0.87	0.88	0.90	2.05
57. ELECTRONIC COMPONENTS & ACCESS.	2.70	2.82	2.96	3.08	3.17	3.23	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.40	0.41	0.43	0.43	0.44	0.44	2.12
59. MOTOR VEHICLES & EQUIPMENT	0.76	0.79	0.82	0.83	0.84	0.85	2.24
60. AIRCRAFT & PARTS	3.90	4.05	4.16	4.29	4.30	4.30	2.00
61. OTHER TRANSPORTATION EQ.	0.52	0.53	0.55	0.56	0.56	0.56	1.63
62. INSTRUMENTS & SUPPLIES	1.53	1.56	1.62	1.68	1.72	1.75	2.65
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.69	0.70	0.73	0.76	0.79	0.81	3.18
64. MISC. MANUFACTURING	0.65	0.66	0.70	0.72	0.75	0.76	3.31
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.08	0.08	0.08	0.09	0.09	0.09	2.77
TOTAL, ALL INDUSTRIES	44.58	46.01	48.02	49.50	50.40	51.10	2.77

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
135. MACHINE TOOL OPERATORS, TOOL ROOM  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.24	0.28	0.30	0.32	0.34	0.35	7.52
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.06	0.06	0.07	8.67
38. NONFERROUS METALS	0.05	0.06	0.06	0.07	0.07	0.08	8.98
40. FAB. STRUCTURAL METAL PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	8.38
41. SCREW MACHINE PROD.&STAMPINGS	0.13	0.14	0.15	0.17	0.18	0.18	7.71
42. OTHER FAB. METAL PRODUCTS	0.04	0.04	0.05	0.05	0.06	0.06	10.11
43. ENGINES & TURBINES	0.11	0.12	0.13	0.14	0.15	0.16	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.03	0.03	0.03	0.04	0.04	9.12
47. METALWORKING MACH. & EQ.	0.19	0.22	0.24	0.27	0.29	0.30	9.36
49. GENERAL INDUSTRY MACHINERY	0.06	0.07	0.07	0.08	0.08	0.09	7.52
50. MISC. NONELECTRICAL MACH.	0.11	0.12	0.13	0.15	0.15	0.16	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.02	0.02	0.02	0.02	0.02	0.02	7.32
53. ELECTRICAL MACHINERY	0.08	0.09	0.10	0.11	0.12	0.13	9.23
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.05	0.05	0.06	0.06	0.07	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.29	0.33	0.36	0.39	0.41	0.42	8.06
57. ELECTRONIC COMPONENTS & ACCESS.	0.11	0.13	0.15	0.17	0.18	0.19	11.35
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.03	0.04	0.04	0.04	0.05	9.56
59. MOTOR VEHICLES & EQUIPMENT	0.15	0.18	0.20	0.24	0.28	0.32	17.14
60. AIRCRAFT & PARTS	1.46	1.65	1.82	2.01	2.15	2.21	8.59
61. OTHER TRANSPORTATION EQ.	0.11	0.12	0.12	0.13	0.13	0.13	2.86
62. INSTRUMENTS & SUPPLIES	0.12	0.14	0.15	0.17	0.18	0.18	8.31
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.02	0.02	0.02	0.02	0.02	8.49
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	5.81
TOTAL, ALL INDUSTRIES	3.52	3.99	4.37	4.80	5.14	5.35	8.77
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.40	0.41	0.42	0.43	0.43	0.43	1.44
37. PRIMARY FERROUS METALS	0.63	0.65	0.68	0.69	0.70	0.70	2.25
38. NONFERROUS METALS	0.58	0.60	0.63	0.64	0.65	0.66	2.41
40. FAB. STRUCTURAL METAL PRODUCTS	1.29	1.30	1.35	1.40	1.44	1.47	2.60
41. SCREW MACHINE PROD.&STAMPINGS	2.06	2.16	2.23	2.27	2.28	2.29	2.18
42. OTHER FAB. METAL PRODUCTS	0.80	0.82	0.86	0.89	0.92	0.94	3.38
43. ENGINES & TURBINES	1.29	1.33	1.38	1.39	1.40	1.41	1.77
45. CONSTR. & MINING MACHINERY	1.23	1.30	1.37	1.42	1.45	1.47	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.44	0.45	0.48	0.50	0.51	0.52	3.62

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
135. MACHINE TOOL OPERATORS, TOOL ROOM  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
47. METALWORKING MACH. & EQ.	3.71	3.86	4.09	4.25	4.38	4.46	3.76
49. GENERAL INDUSTRY MACHINERY	1.38	1.41	1.48	1.52	1.54	1.57	2.62
50. MISC. NONELECTRICAL MACH.	0.97	1.00	1.04	1.06	1.07	1.08	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	0.44	0.46	0.48	0.49	0.50	0.51	2.73
53. ELECTRICAL MACHINERY	1.62	1.65	1.73	1.77	1.79	1.80	2.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.93	0.94	0.97	0.99	1.00	1.02	1.70
56. RADIO, TV, & COMMUNICATION EQ.	0.68	0.69	0.72	0.73	0.73	0.75	1.92
57. ELECTRONIC COMPONENTS & ACCESS.	0.51	0.53	0.55	0.57	0.59	0.60	3.63
58. MISC. ELECTRICAL MACH. & EQ.	1.06	1.09	1.14	1.15	1.16	1.17	2.11
59. MOTOR VEHICLES & EQUIPMENT	7.59	7.94	8.20	8.34	8.43	8.48	2.23
60. AIRCRAFT & PARTS	2.93	3.05	3.13	3.23	3.24	3.23	2.00
61. OTHER TRANSPORTATION EQ.	0.40	0.41	0.42	0.43	0.42	0.43	1.46
62. INSTRUMENTS & SUPPLIES	1.05	1.07	1.11	1.16	1.19	1.21	2.85
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.35	0.35	0.37	0.38	0.39	0.40	3.13
64. MISC. MANUFACTURING	0.49	0.49	0.51	0.52	0.53	0.53	1.78
TOTAL, ALL INDUSTRIES	34.66	35.86	37.27	38.22	38.79	39.20	2.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
136. MILLING&PLANING MACHINE OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TD 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	1.81	2.05	2.24	2.42	2.55	2.65	7.89
37. PRIMARY FERROUS METALS	0.07	0.07	0.08	0.09	0.09	0.10	8.24
38. NONFERROUS METALS	0.04	0.04	0.05	0.05	0.05	0.06	9.30
40. FAB. STRUCTURAL METAL PRODUCTS	0.08	0.10	0.10	0.11	0.12	0.13	8.15
41. SCREW MACHINE PROD.&STAMPINGS	0.09	0.10	0.11	0.12	0.12	0.13	7.74
42. OTHER FAB. METAL PRODUCTS	0.05	0.06	0.06	0.07	0.08	0.08	10.11
43. ENGINES & TURBINES	0.17	0.19	0.21	0.22	0.23	0.24	7.72
45. CONSTR. & MINING MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.06	0.06	0.07	0.08	0.08	0.09	9.12
47. METALWORKING MACH. & EQ.	0.56	0.65	0.71	0.79	0.85	0.88	9.36
48. SPECIAL INDUSTRY MACHINERY	0.02	0.03	0.03	0.04	0.04	0.04	12.08
49. GENERAL INDUSTRY MACHINERY	0.18	0.20	0.22	0.23	0.25	0.26	7.52
50. MISCELLANEOUS ELECTRICAL MACH.	0.91	0.99	1.08	1.19	1.26	1.30	7.53
51. OFFICE COMPUTING & ACCT. MACH.	0.03	0.03	0.03	0.03	0.04	0.04	7.30
52. SERVICE INDUSTRY MACHINES	0.01	0.01	0.01	0.01	0.01	0.02	13.37
53. ELECTRICAL MACHINERY	0.07	0.09	0.09	0.10	0.11	0.12	9.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.02	0.02	0.02	0.02	0.02	8.27
56. RADIO, TV, & COMMUNICATION EQ.	0.32	0.37	0.41	0.44	0.47	0.48	8.29
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.09	0.10	0.11	0.12	0.13	11.36
59. MOTOR VEHICLES & EQUIPMENT	0.06	0.07	0.08	0.09	0.10	0.12	17.14
60. AIRCRAFT & PARTS	4.21	4.77	5.25	5.80	6.20	6.36	8.59
61. OTHER TRANSPORTATION EQ.	0.16	0.17	0.17	0.18	0.18	0.19	3.53
62. INSTRUMENTS & SUPPLIES	0.18	0.20	0.22	0.24	0.26	0.27	8.23
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.05	0.06	0.06	0.07	0.07	0.08	8.53
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.05	0.05	0.05	0.05	5.34
TOTAL, ALL INDUSTRIES	9.31	10.50	11.51	12.62	13.45	13.90	8.35
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	3.00	3.07	3.13	3.20	3.24	3.28	1.79
37. PRIMARY FERROUS METALS	0.93	0.96	0.99	1.01	1.02	1.01	1.85
38. NONFERROUS METALS	0.43	0.45	0.46	0.48	0.48	0.49	2.71
40. FAB. STRUCTURAL METAL PRODUCTS	1.90	1.92	1.97	2.05	2.10	2.14	2.39
41. SCREW MACHINE PROD.&STAMPINGS	1.44	1.51	1.56	1.59	1.60	1.61	2.21
42. OTHER FAB. METAL PRODUCTS	1.07	1.11	1.16	1.20	1.23	1.27	3.39
43. ENGINES & TURBINES	2.01	2.07	2.15	2.17	2.19	2.19	1.78
45. CONSTR. & MINING MACHINERY	2.77	2.93	3.08	3.19	3.27	3.31	3.64

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
136. MILLING&PLANING MACHINE OPERATORS  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
46. MATERIALS HANDLING MACH. & EQ.	0.99	1.02	1.08	1.13	1.16	1.18	3.62
47. METALWORKING MACH. & EQ.	10.97	11.42	12.10	12.59	12.95	13.20	3.76
48. SPECIAL INDUSTRY MACHINERY	3.39	3.46	3.63	3.80	3.89	3.97	3.22
49. GENERAL INDUSTRY MACHINERY	4.10	4.20	4.40	4.52	4.60	4.67	2.62
50. MISC. NONELECTRICAL MACH.	7.91	8.12	8.46	8.65	8.73	8.84	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	0.67	0.70	0.73	0.74	0.75	0.77	2.71
52. SERVICE INDUSTRY MACHINES	0.49	0.51	0.53	0.54	0.54	0.54	2.11
53. ELECTRICAL MACHINERY	1.49	1.52	1.59	1.63	1.65	1.66	2.12
55. ELECTRIC LIGHTING & WIRING EQ.	0.31	0.31	0.32	0.33	0.34	0.34	1.72
56. RADIO, TV, & COMMUNICATION EQ.	0.76	0.78	0.81	0.82	0.83	0.85	2.14
57. ELECTRONIC COMPONENTS & ACCESS.	0.35	0.36	0.38	0.39	0.40	0.41	3.64
59. MOTOR VEHICLES & EQUIPMENT	2.87	3.00	3.10	3.15	3.19	3.21	2.23
60. AIRCRAFT & PARTS	8.44	8.78	9.02	9.30	9.32	9.32	2.00
61. OTHER TRANSPORTATION EQ.	0.55	0.56	0.58	0.60	0.60	0.61	2.12
62. INSTRUMENTS & SUPPLIES	1.55	1.58	1.64	1.70	1.75	1.78	2.77
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.20	1.22	1.27	1.33	1.37	1.40	3.17
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.25	0.26	0.27	0.28	0.28	0.28	2.67
TOTAL, ALL INDUSTRIES	61.56	63.58	66.27	68.27	69.39	70.24	2.67

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
137. POURERS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
<b>DEFENSE INDUCED EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.01	0.01	0.02	0.02	0.02	0.02	5.97
37. PRIMARY FERROUS METALS	0.48	0.54	0.59	0.65	0.70	0.73	8.94
38. NONFERROUS METALS	0.25	0.28	0.31	0.33	0.36	0.37	8.59
40. FAB. STRUCTURAL METAL PRODUCTS	0.03	0.03	0.03	0.03	0.04	0.04	8.71
41. SCREW MACHINE PROD.&STAMPINGS	0.02	0.02	0.02	0.02	0.02	0.02	7.67
42. OTHER FAB. METAL PRODUCTS	0.01	0.02	0.02	0.02	0.02	0.02	10.10
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.02	9.38
49. GENERAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.02	0.02	0.02	7.51
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.67
53. ELECTRICAL MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	9.23
55. ELECTRIC LIGHTING & WIRING EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.21
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.52
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.01	0.01	17.15
60. AIRCRAFT & PARTS	0.05	0.05	0.06	0.06	0.07	0.07	8.65
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	2.61
TOTAL, ALL INDUSTRIES	0.91	1.03	1.12	1.23	1.32	1.38	8.76
<b>TOTAL EMPLOYMENT</b>							
13. ORDNANCE & ACCESSORIES	0.02	0.02	0.02	0.02	0.02	0.02	-0.03
37. PRIMARY FERROUS METALS	6.69	6.98	7.27	7.44	7.54	7.61	2.51
38. NONFERROUS METALS	2.90	2.99	3.09	3.16	3.19	3.21	2.04
40. FAB. STRUCTURAL METAL PRODUCTS	0.56	0.57	0.59	0.62	0.64	0.65	2.91
41. SCREW MACHINE PROD.&STAMPINGS	0.26	0.27	0.28	0.29	0.29	0.29	2.19
42. OTHER FAB. METAL PRODUCTS	0.28	0.29	0.31	0.32	0.33	0.34	3.38
47. METALWORKING MACH. & EQ.	0.19	0.20	0.21	0.22	0.22	0.23	3.78
49. GENERAL INDUSTRY MACHINERY	0.28	0.29	0.30	0.31	0.31	0.32	2.61
50. MISC. NONELECTRICAL MACH.	0.05	0.05	0.06	0.06	0.06	0.06	2.35
53. ELECTRICAL MACHINERY	0.12	0.12	0.13	0.13	0.13	0.13	2.17
55. ELECTRIC LIGHTING & WIRING EQ.	0.20	0.20	0.21	0.21	0.21	0.22	1.66
58. MISC. ELECTRICAL MACH. & EQ.	0.25	0.26	0.27	0.27	0.27	0.28	2.08
59. MOTOR VEHICLES & EQUIPMENT	0.33	0.34	0.35	0.36	0.36	0.36	2.24
60. AIRCRAFT & PARTS	0.09	0.09	0.10	0.10	0.10	0.10	2.05
61. OTHER TRANSPORTATION EQ.	0.03	0.03	0.03	0.03	0.03	0.03	1.20
TOTAL, ALL INDUSTRIES	12.98	13.45	13.99	14.33	14.52	14.61	2.43

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE



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BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
138. POWER BRAKE&BENDING MACH. OP.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.30	0.35	0.38	0.42	0.44	0.46	8.90
23. OTHER FURNITURE & FIXTURES	0.05	0.05	0.05	0.05	0.06	0.06	4.88
37. PRIMARY FERROUS METALS	0.05	0.05	0.05	0.06	0.06	0.06	6.97
38. NONFERROUS METALS	0.03	0.03	0.04	0.04	0.04	0.04	9.55
40. FAB. STRUCTURAL METAL PRODUCTS	0.43	0.48	0.51	0.55	0.58	0.61	7.35
41. SCREW MACHINE PROD.&STAMPINGS	0.12	0.14	0.15	0.16	0.17	0.18	7.69
42. OTHER FAB. METAL PRODUCTS	0.18	0.21	0.23	0.26	0.28	0.30	10.05
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.02	0.02	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.03	0.03	0.03	9.12
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.02	0.02	0.02	9.40
49. GENERAL INDUSTRY MACHINERY	0.03	0.03	0.04	0.04	0.04	0.04	7.51
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.03	0.03	0.03	0.03	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.02	0.02	0.02	0.02	0.02	7.32
52. SERVICE INDUSTRY MACHINES	0.04	0.05	0.05	0.06	0.07	0.08	13.36
53. ELECTRICAL MACHINERY	0.05	0.05	0.06	0.06	0.07	0.07	8.82
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.04	0.04	0.05	0.05	0.05	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.13	0.14	0.16	0.17	0.18	0.19	8.09
57. ELECTRONIC COMPONENTS & ACCESS.	0.02	0.02	0.02	0.03	0.03	0.03	11.37
59. MOTOR VEHICLES & EQUIPMENT	0.06	0.07	0.08	0.10	0.12	0.14	17.14
60. AIRCRAFT & PARTS	0.76	0.86	0.95	1.05	1.12	1.15	8.60
61. OTHER TRANSPORTATION EQ.	0.16	0.17	0.17	0.17	0.18	0.18	3.07
62. INSTRUMENTS & SUPPLIES	0.05	0.05	0.06	0.06	0.07	0.07	8.23
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.01	0.01	0.01	0.01	0.01	0.01	8.41
TOTAL, ALL INDUSTRIES	2.59	2.92	3.18	3.48	3.71	3.88	8.38
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.50	0.52	0.53	0.55	0.56	0.57	2.74
23. OTHER FURNITURE & FIXTURES	3.00	3.03	3.13	3.23	3.31	3.39	2.45
37. PRIMARY FERROUS METALS	0.64	0.66	0.67	0.67	0.67	0.66	0.65
38. NONFERROUS METALS	0.33	0.35	0.36	0.37	0.38	0.38	2.94
40. FAB. STRUCTURAL METAL PRODUCTS	9.56	9.56	9.77	10.07	10.26	10.37	1.63
41. SCREW MACHINE PROD.&STAMPINGS	1.98	2.08	2.14	2.18	2.19	2.20	2.16
42. OTHER FAB. METAL PRODUCTS	4.00	4.13	4.33	4.48	4.59	4.71	3.33
45. CONSTR. & MINING MACHINERY	0.96	1.01	1.07	1.10	1.13	1.15	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.34	0.35	0.37	0.39	0.40	0.41	3.62
47. METALWORKING MACH. & EQ.	0.23	0.24	0.25	0.26	0.27	0.28	3.80

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
138. POWER BRAKE&BENDING MACH. OP.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN
							% GROWTH 82 TO 87
49. GENERAL INDUSTRY MACHINERY	0.68	0.69	0.73	0.75	0.76	0.77	2.62
50. MISC. NONELECTRICAL MACH.	0.19	0.19	0.20	0.20	0.21	0.21	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	0.37	0.39	0.40	0.41	0.42	0.43	2.72
52. SERVICE INDUSTRY MACHINES	2.21	2.30	2.41	2.45	2.46	2.46	2.10
53. ELECTRICAL MACHINERY	0.92	0.94	0.98	1.00	1.00	1.01	1.79
55. ELECTRIC LIGHTING & WIRING EQ.	0.73	0.74	0.76	0.78	0.79	0.80	1.70
56. RADIO, TV, & COMMUNICATION EQ.	0.30	0.31	0.31	0.32	0.32	0.33	1.95
57. ELECTRONIC COMPONENTS & ACCESS.	0.08	0.08	0.09	0.09	0.09	0.10	3.65
59. MOTOR VEHICLES & EQUIPMENT	3.20	3.35	3.46	3.52	3.56	3.58	2.23
60. AIRCRAFT & PARTS	1.53	1.59	1.63	1.68	1.69	1.69	2.00
61. OTHER TRANSPORTATION EQ.	0.55	0.56	0.58	0.59	0.59	0.59	1.66
62. INSTRUMENTS & SUPPLIES	0.40	0.41	0.42	0.44	0.45	0.46	2.77
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.21	0.21	0.22	0.23	0.23	0.24	3.05
TOTAL, ALL INDUSTRIES	35.76	36.61	37.87	38.90	39.51	39.98	2.26

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
139. PUNCH PRESS OPERATORS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.63	0.72	0.79	0.86	0.91	0.94	8.30
22. HOUSEHOLD FURNITURE	0.01	0.01	0.02	0.02	0.02	0.02	3.70
23. OTHER FURNITURE & FIXTURES	0.08	0.09	0.09	0.09	0.10	0.10	4.80
25. PAPERBOARD CONTAINERS & BOXES	0.02	0.02	0.02	0.02	0.02	0.02	8.77
37. PRIMARY FERROUS METALS	0.09	0.10	0.10	0.11	0.12	0.13	7.66
38. NONFERROUS METALS	0.46	0.53	0.58	0.63	0.67	0.70	8.54
39. METAL CONTAINERS	0.06	0.06	0.07	0.07	0.08	0.08	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	1.03	1.16	1.24	1.34	1.42	1.50	7.80
41. SCREW MACHINE PROD.&STAMPINGS	2.14	2.37	2.53	2.74	2.88	2.98	6.81
42. OTHER FAB. METAL PRODUCTS	0.35	0.40	0.44	0.49	0.53	0.56	9.92
43. ENGINES & TURBINES	0.01	0.02	0.02	0.02	0.02	0.02	7.73
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	8.11
45. CONSTR. & MINING MACHINERY	0.01	0.02	0.02	0.02	0.02	0.02	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.03	0.03	0.03	0.04	0.04	9.12
47. METALWORKING MACH. & EQ.	0.23	0.26	0.29	0.32	0.35	0.36	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	12.06
49. GENERAL INDUSTRY MACHINERY	0.12	0.13	0.14	0.15	0.16	0.17	7.51
50. MISC. NONELECTRICAL MACH.	0.18	0.19	0.21	0.23	0.25	0.26	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.06	0.07	0.07	0.08	0.08	0.08	7.32
52. SERVICE INDUSTRY MACHINES	0.07	0.09	0.09	0.11	0.12	0.14	13.37
53. ELECTRICAL MACHINERY	0.24	0.28	0.30	0.33	0.36	0.37	9.01
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.02	0.02	0.02	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.19	0.22	0.23	0.25	0.27	0.29	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.03	1.18	1.30	1.41	1.48	1.51	8.01
57. ELECTRONIC COMPONENTS & ACCESS.	0.41	0.49	0.55	0.61	0.67	0.70	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.09	0.11	0.12	0.13	0.14	0.15	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.44	0.53	0.60	0.71	0.84	0.98	17.14
60. AIRCRAFT & PARTS	0.60	0.68	0.75	0.83	0.89	0.91	8.58
61. OTHER TRANSPORTATION EQ.	0.67	0.72	0.75	0.77	0.80	0.83	4.40
62. INSTRUMENTS & SUPPLIES	0.36	0.41	0.44	0.49	0.52	0.54	8.30
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.06	0.06	0.07	0.08	0.08	0.09	8.44
64. MISC. MANUFACTURING	0.05	0.06	0.06	0.07	0.07	0.07	6.06
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.02	6.03
TOTAL, ALL INDUSTRIES	9.79	11.04	11.98	13.08	13.97	14.63	8.36

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
139. PUNCH PRESS OPERATORS, METAL  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
13. ORDNANCE & ACCESSORIES	1.05	1.08	1.10	1.13	1.15	1.17	2.18
22. HOUSEHOLD FURNITURE	2.33	2.46	2.54	2.62	2.68	2.71	3.03
23. OTHER FURNITURE & FIXTURES	5.14	5.19	5.36	5.53	5.65	5.78	2.38
25. PAPERBOARD CONTAINERS & BOXES	0.70	0.72	0.74	0.75	0.76	0.76	1.71
37. PRIMARY FERROUS METALS	1.22	1.25	1.29	1.31	1.31	1.30	1.30
38. NONFERROUS METALS	5.48	5.64	5.83	5.95	6.01	6.05	1.99
39. METAL CONTAINERS	4.04	3.99	4.00	4.07	4.09	4.12	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	23.08	23.17	23.78	24.61	25.17	25.55	2.05
41. SCREW MACHINE PROD. & STAMPINGS	34.90	36.35	37.21	37.53	37.42	37.28	1.33
42. OTHER FAB. METAL PRODUCTS	7.56	7.81	8.16	8.43	8.64	8.85	3.20
43. ENGINES & TURBINES	0.18	0.19	0.19	0.19	0.20	0.20	1.79
44. FARM & GARDEN MACHINERY	3.07	3.15	3.31	3.36	3.39	3.43	2.27
45. CONSTR. & MINING MACHINERY	1.23	1.30	1.37	1.42	1.45	1.47	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.44	0.45	0.48	0.50	0.51	0.53	3.62
47. METALWORKING MACH. & EQ.	4.48	4.67	4.94	5.14	5.29	5.39	3.76
48. SPECIAL INDUSTRY MACHINERY	0.95	0.97	1.01	1.06	1.08	1.11	3.22
49. GENERAL INDUSTRY MACHINERY	2.72	2.78	2.92	2.99	3.04	3.09	2.62
50. MISC. NONELECTRICAL MACH.	1.56	1.60	1.67	1.71	1.72	1.74	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.58	1.65	1.72	1.75	1.77	1.81	2.73
52. SERVICE INDUSTRY MACHINES	4.08	4.25	4.45	4.52	4.53	4.53	2.10
53. ELECTRICAL MACHINERY	4.87	4.95	5.17	5.29	5.34	5.37	1.96
54. HOUSEHOLD APPLIANCES	4.85	4.98	5.11	5.29	5.40	5.48	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	4.02	4.04	4.15	4.25	4.32	4.37	1.70
56. RADIO, TV, & COMMUNICATION EQ.	2.44	2.49	2.57	2.61	2.63	2.67	1.87
57. ELECTRONIC COMPONENTS & ACCESS.	1.87	1.95	2.04	2.13	2.19	2.23	3.65
58. MISC. ELECTRICAL MACH. & EQ.	3.46	3.58	3.72	3.76	3.81	3.84	2.12
59. MOTOR VEHICLES & EQUIPMENT	22.95	23.99	24.81	25.21	25.48	25.63	2.23
60. AIRCRAFT & PARTS	1.21	1.26	1.29	1.33	1.33	1.33	1.99
61. OTHER TRANSPORTATION EQ.	2.32	2.41	2.53	2.61	2.64	2.68	2.97
62. INSTRUMENTS & SUPPLIES	3.09	3.15	3.27	3.40	3.49	3.55	2.83
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.33	1.35	1.40	1.47	1.51	1.55	3.09
64. MISC. MANUFACTURING	4.82	4.90	5.06	5.20	5.29	5.33	2.02
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.27	0.28	0.29	0.29	0.30	0.30	2.10
TOTAL, ALL INDUSTRIES	163.57	168.26	173.76	177.69	179.91	181.49	2.10

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
140. WELDERS&FLAMECUTTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.61
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.76
5. IRON ORE MINING	0.09	0.10	0.11	0.12	0.12	0.12	7.84
6. NONFERROUS METAL MINING	0.07	0.09	0.10	0.11	0.12	0.13	11.42
7. COAL MINING	0.18	0.21	0.23	0.25	0.27	0.29	9.54
8. CRUDE PETROLEUM & N. GAS	0.25	0.26	0.27	0.29	0.30	0.30	4.12
9. STONE&CLAY MINING & QUARRYING	0.06	0.07	0.08	0.09	0.10	0.10	10.10
10. CHEM&FERTILIZER MIN. MINING	0.01	0.01	0.01	0.01	0.01	0.01	7.90
11. NEW CONSTRUCTION	1.18	1.33	1.43	1.58	1.70	1.79	8.71
13. ORDNANCE & ACCESSORIES	3.49	3.99	4.40	4.81	5.12	5.36	8.96
20. LUMBER & WOOD PRDDUCTS	0.04	0.04	0.05	0.05	0.08	0.06	11.01
22. HOUSEHOLD FURNITURE	0.01	0.01	0.01	0.02	0.02	0.02	3.69
23. OTHER FURNITURE & FIXTURES	0.11	0.11	0.12	0.13	0.13	0.14	4.81
24. PAPER & ALLIED PRODUCTS	0.04	0.05	0.05	0.06	0.06	0.06	6.60
27. CHEMICALS & PRODUCTS	0.14	0.16	0.17	0.19	0.20	0.21	8.00
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.02	0.02	0.02	0.02	8.72
31. PET REFINING & REL. PROD.	0.09	0.10	0.10	0.11	0.12	0.12	5.17
32. RUBBER & MISC. PLASTICS PROD.	0.02	0.02	0.03	0.03	0.03	0.04	10.12
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.02	0.02	11.76
36. STONE & CLAY PRODUCTS	0.12	0.13	0.14	0.16	0.17	0.18	8.35
37. PRIMARY FERROUS METALS	1.31	1.46	1.58	1.72	1.83	1.91	7.80
38. NONFERROUS METALS	0.40	0.46	0.50	0.56	0.60	0.63	9.69
39. METAL CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	2.55	2.86	3.04	3.25	3.43	3.60	7.15
41. SCREW MACHINE PRDD.&STAMPINGS	0.74	0.83	0.89	0.98	1.04	1.08	7.68
42. OTHER FAB. METAL PRODUCTS	0.58	0.67	0.73	0.81	0.88	0.94	10.04
43. ENGINES & TURBINES	0.23	0.26	0.28	0.30	0.32	0.33	7.72
44. FARM & GARDEN MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	8.11
45. CONSTR. & MINING MACHINERY	0.38	0.42	0.46	0.49	0.52	0.54	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.65	0.75	0.81	0.90	0.97	1.01	9.12
47. METALWRKING MACH. & EQ.	0.30	0.34	0.38	0.42	0.45	0.47	9.36
48. SPECIAL INDUSTRY MACHINERY	0.04	0.05	0.05	0.06	0.07	0.07	12.06
49. GENERAL INDUSTRY MACHINERY	0.41	0.46	0.50	0.53	0.57	0.59	7.51
50. MISC. NONELECTRICAL MACH.	1.31	1.42	1.56	1.72	1.82	1.88	7.54
51. OFFICE, COMPUTING & ACCT. MACH.	0.07	0.08	0.09	0.10	0.10	0.10	7.31
52. SERVICE INDUSTRY MACHINES	0.18	0.21	0.23	0.26	0.30	0.33	13.37
53. ELECTRICAL MACHINERY	0.34	0.38	0.42	0.46	0.49	0.51	8.88

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
140. WELDERS&FLAMECUTTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.51
55. ELECTRIC LIGHTING & WIRING EQ.	0.10	0.11	0.12	0.13	0.14	0.14	8.25
56. RADIO, TV, & COMMUNICATION EQ.	0.89	1.02	1.12	1.21	1.28	1.30	8.05
57. ELECTRONIC COMPONENTS & ACCESS.	0.42	0.80	0.57	0.63	0.69	0.72	11.36
58. MISC. ELECTRICAL MACH. & EQ.	0.06	0.07	0.08	0.08	0.09	0.10	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.88	1.08	1.20	1.42	1.67	1.95	17.14
60. AIRCRAFT & PARTS	2.52	2.85	3.14	3.47	3.71	3.80	8.59
61. OTHER TRANSPORTATION EQ.	10.51	11.07	11.42	11.84	12.00	12.38	3.30
62. INSTRUMENTS & SUPPLIES	0.45	0.50	0.55	0.60	0.64	0.66	8.23
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.03	0.04	0.04	0.04	0.05	0.05	8.45
64. MISC. MANUFACTURING	0.03	0.03	0.04	0.04	0.04	0.04	4.97
65. TRANSPORTATION & WAREHOUSING	0.35	0.38	0.38	0.39	0.41	0.41	3.26
68. UTILITIES	0.14	0.15	0.16	0.17	0.18	0.18	6.05
69. WHOLESALE & RETAIL TRADE	0.07	0.08	0.09	0.10	0.11	0.11	9.19
72. PERSONAL SERVICES EXC. AUTO.	0.76	0.88	1.00	1.13	1.24	1.34	12.10
73. BUSINESS SERVICES	0.07	0.08	0.09	0.10	0.10	0.11	9.63
75. AUTOMOBILE REPAIR & SERVICE	0.10	0.12	0.12	0.13	0.14	0.15	6.79
77. MISC. SERVICES	0.02	0.02	0.02	0.02	0.02	0.02	2.54
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.93	3.12	3.30	3.48	3.61	3.69	4.89
82. GOVERNMENT INDUSTRY	5.82	5.72	5.84	6.02	6.13	6.18	1.19
TOTAL, ALL INDUSTRIES	41.67	45.26	48.23	51.50	54.31	56.42	6.25
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	1.05	1.06	1.05	1.03	1.02	1.01	-0.80
2. OTHER AGRICULTURAL PRODUCTS	7.62	7.65	7.68	7.65	7.64	7.63	0.02
5. IRON ORE MINING	1.68	1.80	1.92	1.90	1.86	1.82	1.68
6. NONFERROUS METAL MINING	1.27	1.35	1.41	1.45	1.45	1.46	2.81
7. COAL MINING	6.46	6.83	7.12	7.33	7.60	7.79	3.82
8. CRUDE PETROLEUM & N. GAS	3.38	3.35	3.34	3.28	3.23	3.25	-0.66
9. STONE&CLAY MINING & QUARRYING	2.03	2.07	2.14	2.24	2.29	2.31	2.89
10. CHEM&FERTILIZER MIN. MINING	0.44	0.45	0.47	0.48	0.48	0.48	2.00
11. NEW CONSTRUCTION	31.31	31.99	32.85	33.71	34.54	35.04	2.28
13. ORDNANCE & ACCESSORIES	5.78	5.98	6.15	6.35	6.50	6.63	2.79
20. LUMBER & WOOD PRODUCTS	1.79	1.97	2.09	2.21	2.27	2.29	5.08
22. HOUSEHOLD FURNITURE	2.21	2.33	2.41	2.49	2.54	2.57	3.03
23. OTHER FURNITURE & FIXTURES	6.88	6.95	7.18	7.41	7.58	7.75	2.39
24. PAPER & ALLIED PRODUCTS	2.39	2.46	2.49	2.50	2.49	2.49	0.77
27. CHEMICALS & PRODUCTS	3.00	3.07	3.12	3.17	3.19	3.22	1.46

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
140. WELDERS&FLAMECUTTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
28. PLASTICS & SYNTHETIC MATLS.	0.54	0.56	0.58	0.59	0.60	0.60	2.32
31. PET REFINING & REL. PROD.	1.74	1.74	1.75	1.76	1.77	1.76	0.23
32. RUBBER & MISC. PLASTICS PROD.	0.80	0.83	0.86	0.88	0.91	0.91	2.71
35. GLASS & GLASS PRODUCTS	0.43	0.45	0.47	0.48	0.49	0.49	2.86
38. STONE & CLAY PRODUCTS	3.65	3.73	3.79	3.89	3.91	3.86	1.11
37. PRIMARY FERROUS METALS	18.42	18.97	19.58	19.80	19.86	19.77	1.43
38. NONFERROUS METALS	4.68	4.87	5.09	5.25	5.38	5.45	3.08
39. METAL CONTAINERS	0.78	0.75	0.75	0.78	0.77	0.77	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	57.17	57.03	58.18	59.84	60.88	61.42	1.44
41. SCREW MACHINE PROD.&STAMPINGS	12.14	12.75	13.18	13.38	13.45	13.50	2.15
42. OTHER FAB. METAL PRODUCTS	12.62	13.05	13.66	14.13	14.49	14.86	3.32
43. ENGINES & TURBINES	2.73	2.82	2.93	2.96	2.97	2.99	1.78
44. FARM & GARDEN MACHINERY	10.15	10.42	10.95	11.11	11.23	11.36	2.27
45. CONSTR. & MINING MACHINERY	32.08	33.91	35.88	38.95	37.94	38.38	3.64
46. MATERIALS HANDLING MACH. & EQ.	11.47	11.83	12.55	13.08	13.42	13.70	3.82
47. METALWORKING MACH. & EQ.	5.79	6.03	6.39	6.85	6.84	6.97	3.78
48. SPECIAL INDUSTRY MACHINERY	5.72	5.85	6.14	6.41	6.57	6.71	3.22
49. GENERAL INDUSTRY MACHINERY	9.36	9.60	10.05	10.32	10.49	10.66	2.82
50. MISC. NONELECTRICAL MACH.	11.42	11.72	12.22	12.49	12.61	12.75	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.90	1.98	2.08	2.10	2.13	2.18	2.72
52. SERVICE INDUSTRY MACHINES	9.88	10.27	10.78	10.94	10.96	10.97	2.10
53. ELECTRICAL MACHINERY	6.74	6.84	7.14	7.28	7.35	7.39	1.85
54. HOUSEHOLD APPLIANCES	2.93	3.01	3.09	3.19	3.26	3.31	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	2.03	2.04	2.10	2.15	2.18	2.21	1.70
56. RADIO, TV, & COMMUNICATION EQ.	2.10	2.15	2.21	2.25	2.27	2.30	1.90
57. ELECTRONIC COMPONENTS & ACCESS.	1.93	2.01	2.11	2.19	2.28	2.30	3.84
58. MISC. ELECTRICAL MACH. & EQ.	2.23	2.31	2.40	2.43	2.46	2.48	2.12
59. MOTOR VEHICLES & EQUIPMENT	45.72	47.80	49.42	50.21	50.78	51.05	2.23
60. AIRCRAFT & PARTS	5.05	5.25	5.39	5.58	5.57	5.57	1.99
61. OTHER TRANSPORTATION EQ.	36.28	37.32	38.81	39.43	39.50	39.82	1.89
62. INSTRUMENTS & SUPPLIES	3.83	3.89	4.05	4.21	4.32	4.39	2.77
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.77	0.78	0.81	0.84	0.87	0.89	3.09
64. MISC. MANUFACTURING	2.88	2.87	2.94	2.99	3.01	3.00	0.98
65. TRANSPORTATION & WAREHOUSING	8.18	8.27	8.35	8.46	8.42	8.33	0.37
68. UTILITIES	8.40	8.41	8.42	8.42	8.43	8.43	0.10
69. WHOLESALE & RETAIL TRADE	11.78	12.11	12.44	12.71	12.91	13.12	2.17
72. PERSONAL SERVICES EXC. AUTO.	41.29	43.60	46.10	48.82	51.16	53.58	5.35
73. BUSINESS SERVICES	1.41	1.47	1.54	1.61	1.68	1.74	4.18
75. AUTOMOBILE REPAIR & SERVICE	7.21	7.31	7.34	7.35	7.36	7.39	0.51



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
140. WELDERS&FLAMECUTTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
77. MISC. SERVICES	2.73	2.73	2.73	2.75	2.78	2.82	0.61
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	35.90	36.94	38.20	39.21	39.89	40.41	2.40
82. GOVERNMENT INDUSTRY	14.33	14.29	14.43	14.68	14.92	15.15	1.12
TOTAL, ALL INDUSTRIES	534.62	550.12	568.89	583.82	594.00	601.80	2.40

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
141. METALWORKING OPERATIVES NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.10	0.11	0.12	0.13	0.13	0.14	8.79
36. STONE & CLAY PRODUCTS	0.03	0.04	0.04	0.04	0.04	0.05	8.29
37. PRIMARY FERROUS METALS	0.97	1.08	1.17	1.27	1.35	1.41	7.66
38. NONFERROUS METALS	1.11	1.27	1.39	1.52	1.83	1.70	8.95
40. FAB. STRUCTURAL METAL PRODUCTS	0.06	0.07	0.08	0.09	0.09	0.10	8.24
41. SCREW MACHINE PROD.&STAMPINGS	0.05	0.05	0.06	0.06	0.07	0.07	7.70
42. OTHER FAB. METAL PRODUCTS	0.15	0.17	0.19	0.21	0.22	0.23	8.77
43. ENGINES & TURBINES	0.01	0.01	0.01	0.01	0.01	0.01	7.77
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.12
47. METALWORKING MACH. & EQ.	0.02	0.02	0.02	0.02	0.03	0.03	9.37
49. GENERAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.03	0.03	0.03	7.50
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.01	0.02	0.02	7.55
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.02	0.02	7.37
53. ELECTRICAL MACHINERY	0.05	0.05	0.06	0.06	0.07	0.07	9.26
55. ELECTRIC LIGHTING & WIRING EQ.	0.02	0.02	0.02	0.02	0.02	0.02	8.23
56. RADIO, TV, & COMMUNICATION EQ.	0.14	0.17	0.18	0.20	0.21	0.21	8.18
57. ELECTRONIC COMPONENTS & ACCESS.	0.68	0.78	0.88	0.98	1.07	1.12	11.37
60. AIRCRAFT & PARTS	0.14	0.15	0.17	0.19	0.20	0.20	8.59
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.06	4.31
62. INSTRUMENTS & SUPPLIES	0.05	0.06	0.07	0.07	0.08	0.08	8.88
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	7.35
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.03	0.03	0.03	6.51
TOTAL, ALL INDUSTRIES	3.70	4.22	4.82	5.07	5.43	5.88	8.85
TOTAL EMPLOYMENT							
13. ORDNANCE & ACCESSORIES	0.18	0.17	0.17	0.17	0.17	0.17	0.75
36. STONE & CLAY PRODUCTS	0.96	0.98	0.99	1.02	1.02	1.01	1.06
37. PRIMARY FERROUS METALS	13.84	14.03	14.45	14.80	14.83	14.55	1.30
38. NONFERROUS METALS	13.11	13.55	14.05	14.41	14.59	14.75	2.38
40. FAB. STRUCTURAL METAL PRODUCTS	1.45	1.48	1.51	1.57	1.61	1.64	2.47
41. SCREW MACHINE PROD.&STAMPINGS	0.80	0.84	0.87	0.88	0.88	0.89	2.17
42. OTHER FAB. METAL PRODUCTS	3.31	3.38	3.50	3.57	3.82	3.88	2.12
43. ENGINES & TURBINES	0.08	0.09	0.09	0.09	0.09	0.09	1.83
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.12	0.13	0.13	0.14	0.14	3.62
47. METALWORKING MACH. & EQ.	0.34	0.36	0.38	0.39	0.41	0.41	3.77
49. GENERAL INDUSTRY MACHINERY	0.47	0.48	0.50	0.51	0.52	0.53	2.60

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
141. METALWORKING OPERATIVES NEC  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
50. MISC. NONELECTRICAL MACH.	0.10	0.10	0.10	0.11	0.11	0.11	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	0.29	0.30	0.31	0.32	0.32	0.33	2.77
53. ELECTRICAL MACHINERY	0.92	0.94	0.98	1.00	1.02	1.02	2.20
55. ELECTRIC LIGHTING & WIRING EQ.	0.35	0.35	0.36	0.37	0.37	0.38	1.68
56. RADIO, TV, & COMMUNICATION EQ.	0.34	0.35	0.36	0.37	0.37	0.38	2.03
57. ELECTRONIC COMPONENTS & ACCESS.	3.00	3.12	3.28	3.41	3.51	3.58	3.65
60. AIRCRAFT & PARTS	0.27	0.28	0.29	0.30	0.30	0.30	1.99
61. OTHER TRANSPORTATION EQ.	0.16	0.16	0.17	0.18	0.18	0.18	2.88
62. INSTRUMENTS & SUPPLIES	0.47	0.48	0.50	0.52	0.54	0.55	3.20
64. MISC. MANUFACTURING	0.65	0.67	0.70	0.73	0.75	0.77	3.26
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.24	0.24	0.25	0.26	0.26	0.26	2.10
TOTAL, ALL INDUSTRIES	43.17	44.46	46.01	47.04	47.58	47.90	2.10

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
142. ALL OTHER OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.06	0.06	0.06	0.06	0.06	0.06	2.61
2. OTHER AGRICULTURAL PRODUCTS	0.10	0.10	0.10	0.11	0.11	0.11	2.47
3. FORESTRY & FISHERY PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	5.96
4. AGR., FORESTRY, & FISHERY SERV.	0.18	0.20	0.21	0.22	0.24	0.25	6.14
5. IRON ORE MINING	0.50	0.57	0.62	0.67	0.70	0.72	7.85
6. NONFERROUS METAL MINING	1.03	1.21	1.34	1.49	1.62	1.72	10.88
7. COAL MINING	2.34	2.65	2.90	3.16	3.43	3.59	8.93
8. CRUDE PETROLEUM & N. GAS	8.82	9.36	9.65	10.15	10.63	10.69	3.94
9. STONE & CLAY MINING & QUARRYING	1.02	1.15	1.25	1.41	1.54	1.64	9.94
10. CHEM. FERTILIZER MIN. MINING	0.15	0.16	0.18	0.19	0.21	0.21	7.91
11. NEW CONSTRUCTION	5.71	6.46	6.96	7.69	8.28	8.70	8.79
13. ORDNANCE & ACCESSORIES	11.75	13.30	14.50	15.69	16.56	17.20	7.92
14. FOOD & KINDRED PRODUCTS	5.33	5.77	6.06	6.40	6.65	6.79	4.96
15. TOBACCO MANUFACTURES	0.03	0.04	0.04	0.04	0.04	0.04	7.15
16. FABRIC, YARN & THREAD MILLS	3.23	3.45	3.62	3.82	3.99	4.10	4.91
17. MISC. TEXTILE GOODS	0.78	0.83	0.90	0.97	1.04	1.08	7.17
18. APPAREL	3.24	3.44	3.61	3.87	4.12	4.35	6.03
19. MISC. FABRICATED TEXTILE PROD.	3.01	3.18	3.32	3.52	3.65	3.79	4.72
20. LUMBER & WOOD PRODUCTS	3.43	3.88	4.18	4.57	4.97	5.26	8.94
21. WOOD CONTAINERS	0.96	1.11	1.22	1.34	1.46	1.53	9.82
22. HOUSEHOLD FURNITURE	0.62	0.66	0.71	0.74	0.76	0.74	3.70
23. OTHER FURNITURE & FIXTURES	0.62	0.65	0.67	0.71	0.75	0.78	4.70
24. PAPER & ALLIED PRODUCTS	3.51	3.86	4.17	4.48	4.72	4.87	6.78
25. PAPERBOARD CONTAINERS & BOXES	1.92	2.15	2.35	2.58	2.77	2.90	8.62
26. PRINTING & PUBLISHING	3.54	3.80	4.03	4.31	4.49	4.58	5.28
27. CHEMICALS & PRODUCTS	6.07	6.66	7.12	7.69	8.23	8.59	7.19
28. PLASTICS & SYNTHETIC MATLS.	1.75	1.95	2.15	2.37	2.53	2.63	8.48
29. DRUGS, CLEANING & TOILET PREP.	0.25	0.26	0.27	0.29	0.29	0.30	3.53
30. PAINTS & ALLIED PRODUCTS	0.91	1.00	1.09	1.18	1.27	1.33	7.97
31. PET REFINING & REL. PROD.	2.18	2.30	2.42	2.58	2.71	2.78	4.95
32. RUBBER & MISC. PLASTICS PROD.	9.01	10.18	11.32	12.70	13.90	14.88	10.27
33. LEATHER TANNING & FINISHING	0.05	0.05	0.05	0.06	0.06	0.06	5.38
34. FOOTWEAR & OTHER LEATHER PROD.	0.32	0.34	0.36	0.38	0.40	0.41	5.41
35. GLASS & GLASS PRODUCTS	1.78	2.01	2.20	2.44	2.63	2.79	9.39
36. STONE & CLAY PRODUCTS	5.54	6.33	6.81	7.52	8.08	8.49	8.91
37. PRIMARY FERROUS METALS	8.46	9.44	10.22	11.17	11.93	12.47	8.08
38. NONFERROUS METALS	8.80	10.10	11.11	12.26	13.22	13.85	9.49

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
142. ALL OTHER OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
39. METAL CONTAINERS	0.29	0.31	0.33	0.36	0.38	0.40	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	3.56	4.01	4.30	4.63	4.92	5.19	7.81
41. SCREW MACHINE PROD.&STAMPINGS	2.58	2.89	3.11	3.40	3.61	3.76	7.80
42. OTHER FAB. METAL PRODUCTS	3.39	3.86	4.21	4.65	5.02	5.28	9.27
43. ENGINES & TURBINES	0.84	0.94	1.03	1.09	1.14	1.19	7.30
44. FARM & GARDEN MACHINERY	0.04	0.05	0.05	0.06	0.06	0.06	7.28
45. CONSTR. & MINING MACHINERY	0.23	0.26	0.28	0.30	0.32	0.33	7.38
46. MATERIALS HANDLING MACH. & EQ.	0.39	0.45	0.49	0.54	0.58	0.61	9.25
47. METALWORKING MACH. & EQ.	0.99	1.13	1.24	1.36	1.46	1.51	8.81
48. SPECIAL INDUSTRY MACHINERY	0.13	0.15	0.16	0.19	0.21	0.22	11.32
49. GENERAL INDUSTRY MACHINERY	0.92	1.02	1.10	1.18	1.25	1.29	7.15
50. MISC. NONELECTRICAL MACH.	1.35	1.47	1.60	1.75	1.85	1.90	6.96
51. OFFICE, COMPUTING & ACCT. MACH.	0.47	0.53	0.57	0.61	0.63	0.65	6.73
52. SERVICE INDUSTRY MACHINES	0.26	0.30	0.33	0.38	0.43	0.48	13.37
53. ELECTRICAL MACHINERY	2.18	2.48	2.71	2.97	3.19	3.33	8.89
54. HOUSEHOLD APPLIANCES	0.05	0.06	0.07	0.07	0.08	0.08	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	1.29	1.45	1.55	1.70	1.82	1.90	7.95
56. RADIO, TV, & COMMUNICATION EQ.	20.21	23.13	25.31	27.33	28.65	29.18	7.63
57. ELECTRONIC COMPONENTS & ACCESS.	12.99	15.37	17.20	19.13	20.75	21.62	10.72
58. MISC. ELECTRICAL MACH. & EQ.	0.69	0.79	0.86	0.95	1.03	1.08	9.57
59. MOTOR VEHICLES & EQUIPMENT	2.63	3.14	3.57	4.24	4.97	5.81	17.14
60. AIRCRAFT & PARTS	19.10	21.50	23.59	25.91	27.59	28.20	8.11
61. OTHER TRANSPORTATION EQ.	9.22	9.72	10.04	10.25	10.58	10.90	3.42
62. INSTRUMENTS & SUPPLIES	5.53	6.24	6.81	7.47	7.96	8.25	8.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.13	1.24	1.35	1.48	1.60	1.68	8.30
64. MISC. MANUFACTURING	1.10	1.21	1.28	1.38	1.46	1.50	6.36
65. TRANSPORTATION & WAREHOUSING	44.05	47.30	50.16	54.00	56.95	58.82	5.95
66. COMMUNICATION EXC. RADIO & TV	0.13	0.13	0.14	0.15	0.16	0.17	5.65
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.15
68. UTILITIES	0.88	0.98	1.06	1.15	1.21	1.24	7.04
69. WHOLESALE & RETAIL TRADE	12.58	14.15	15.51	17.10	18.42	19.29	8.92
70. FINANCE & INSURANCE	0.05	0.06	0.07	0.07	0.08	0.08	9.38
71. REAL ESTATE & RENTAL	0.07	0.08	0.09	0.10	0.11	0.11	8.67
72. PERSONAL SERVICES EXC. AUTO.	6.94	7.66	8.17	8.78	9.21	9.50	6.48
73. BUSINESS SERVICES	7.62	8.52	9.32	10.25	10.95	11.35	8.30
74. EATING & DRINKING PLACES	0.41	0.47	0.53	0.58	0.63	0.66	9.76
75. AUTOMOBILE REPAIR & SERVICE	1.70	1.89	2.05	2.23	2.39	2.47	7.75
76. AMUSEMENTS	0.12	0.14	0.15	0.16	0.18	0.19	8.54
77. MISC. SERVICES	2.29	2.36	2.46	2.61	2.73	2.80	4.08

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
142. ALL OTHER OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	16.04	17.20	18.27	19.45	20.25	20.68	5.22
82. GOVERNMENT INDUSTRY	34.62	34.05	34.82	35.89	36.59	36.95	1.31
TOTAL, ALL INDUSTRIES	326.12	357.45	383.80	414.81	439.52	454.95	6.89
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	9.17	9.25	9.10	8.94	8.88	8.80	-0.80
2. OTHER AGRICULTURAL PRODUCTS	66.03	66.10	66.21	65.79	65.46	65.17	-0.26
3. FORESTRY & FISHERY PRODUCTS	2.56	2.70	2.87	2.99	3.00	2.96	3.00
4. AGR., FORESTRY, & FISHERY SERV.	9.90	10.10	10.13	10.29	10.34	10.44	1.08
5. IRON ORE MINING	9.71	10.42	11.14	11.02	10.80	10.56	1.89
6. NONFERROUS METAL MINING	17.66	18.62	19.34	19.82	19.68	19.79	2.31
7. COAL MINING	83.60	87.75	90.91	93.07	96.06	98.07	3.24
8. CRUDE PETROLEUM & N. GAS	119.45	119.02	118.44	115.89	113.94	114.54	-0.84
9. STONE & CLAY MINING & QUARRYING	32.41	33.09	34.20	35.64	36.42	36.74	2.54
10. CHEM. FERTILIZER MIN. MINING	7.24	7.42	7.67	7.85	7.92	7.99	2.01
11. NEW CONSTRUCTION	151.94	155.34	158.70	163.96	168.14	170.70	2.36
13. ORDNANCE & ACCESSORIES	19.44	19.89	20.26	20.74	21.03	21.27	1.81
14. FOOD & KINDRED PRODUCTS	797.45	807.42	811.36	807.55	798.74	791.35	-0.15
15. TOBACCO MANUFACTURES	26.41	26.41	26.08	25.67	25.38	24.92	-1.16
16. FABRIC, YARN & THREAD MILLS	258.89	266.02	272.58	277.39	279.32	279.15	1.52
17. MISC. TEXTILE GOODS	52.56	54.59	56.88	58.79	59.80	60.27	2.77
18. APPAREL	900.69	907.90	928.19	945.42	946.26	946.38	0.99
19. MISC. FABRICATED TEXTILE PROD.	101.96	104.57	107.42	109.51	110.86	111.98	1.89
20. LUMBER & WOOD PRODUCTS	165.80	179.47	186.31	193.24	195.16	193.35	3.12
21. WOOD CONTAINERS	16.10	16.07	16.38	16.79	16.96	17.06	1.16
22. HOUSEHOLD FURNITURE	106.94	112.79	118.48	120.39	123.01	124.16	3.03
23. OTHER FURNITURE & FIXTURES	39.04	39.38	40.62	41.87	42.79	43.69	2.28
24. PAPER & ALLIED PRODUCTS	188.53	194.36	196.67	197.57	197.62	197.57	0.94
25. PAPERBOARD CONTAINERS & BOXES	87.30	89.52	91.44	93.05	93.93	94.37	1.57
26. PRINTING & PUBLISHING	225.32	224.30	224.14	223.96	223.04	222.02	-0.29
27. CHEMICALS & PRODUCTS	126.05	127.86	129.29	130.03	130.29	130.49	0.69
28. PLASTICS & SYNTHETIC MATLS.	72.68	75.18	77.76	79.53	80.42	80.53	2.07
29. DRUGS, CLEANING & TOILET PREP.	70.90	70.93	71.59	72.03	71.63	71.42	0.15
30. PAINTS & ALLIED PRODUCTS	17.28	18.03	18.63	19.23	19.58	19.77	2.76
31. PET REFINING & REL. PROD.	40.51	40.35	40.49	40.75	40.71	40.56	0.03
32. RUBBER & MISC. PLASTICS PROD.	330.96	342.04	356.31	367.77	377.04	380.74	2.84
33. LEATHER TANNING & FINISHING	6.86	9.16	9.47	9.49	9.48	9.45	1.29
34. FOOTWEAR & OTHER LEATHER PROD.	120.64	121.13	121.82	121.62	120.82	120.06	-0.10

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
142. ALL OTHER OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
35. GLASS & GLASS PRODUCTS	80.98	82.45	83.98	84.73	84.44	83.76	0.68
36. STONE & CLAY PRODUCTS	171.63	176.11	180.09	185.54	187.42	186.11	1.63
37. PRIMARY FERROUS METALS	118.68	122.62	126.77	128.64	129.40	129.11	1.70
38. NONFERROUS METALS	103.96	107.98	112.53	116.01	118.05	119.88	2.89
39. METAL CONTAINERS	19.63	19.36	19.40	19.74	19.87	19.98	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	79.84	80.17	82.28	85.18	87.13	88.43	2.07
41. SCREW MACHINE PROD. & STAMPINGS	42.08	44.27	45.74	46.56	46.84	47.06	2.26
42. OTHER FAB. METAL PRODUCTS	73.70	75.65	78.63	80.75	82.23	83.79	2.60
43. ENGINES & TURBINES	10.04	10.32	10.66	10.73	10.75	10.75	1.38
44. FARM & GARDEN MACHINERY	13.20	13.43	14.01	14.10	14.15	14.21	1.49
45. CONSTR. & MINING MACHINERY	19.33	20.46	21.56	22.35	22.98	23.26	3.77
46. MATERIALS HANDLING MACH. & EQ.	6.91	7.14	7.58	7.90	8.13	8.31	3.75
47. METALWORKING MACH. & EQ.	19.28	19.96	21.04	21.78	22.30	22.61	3.24
48. SPECIAL INDUSTRY MACHINERY	17.85	18.11	18.88	19.60	19.94	20.23	2.53
49. GENERAL INDUSTRY MACHINERY	20.90	21.34	22.26	22.78	23.09	23.38	2.27
50. MISC. NONELECTRICAL MACH.	11.83	12.07	12.51	12.73	12.78	12.86	1.68
51. OFFICE, COMPUTING & ACCT. MACH.	12.41	12.82	13.29	13.45	13.57	13.81	2.16
52. SERVICE INDUSTRY MACHINES	14.29	14.85	15.56	15.81	15.85	15.85	2.10
53. ELECTRICAL MACHINERY	43.72	44.38	46.28	47.25	47.67	47.92	1.86
54. HOUSEHOLD APPLIANCES	21.31	21.89	22.48	23.25	23.75	24.08	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	27.07	27.17	27.82	28.41	28.76	29.05	1.42
56. RADIO, TV, & COMMUNICATION EQ.	47.85	48.74	50.04	50.69	50.93	51.56	1.51
57. ELECTRONIC COMPONENTS & ACCESS.	59.32	61.48	64.16	66.37	67.88	68.93	3.05
58. MISC. ELECTRICAL MACH. & EQ.	25.30	26.18	27.22	27.53	27.87	28.10	2.12
59. MOTOR VEHICLES & EQUIPMENT	136.20	142.38	147.21	149.57	151.21	152.07	2.23
60. AIRCRAFT & PARTS	38.25	39.60	40.50	41.59	41.50	41.29	1.54
61. OTHER TRANSPORTATION EQ.	31.81	32.78	33.96	34.71	34.81	35.13	2.00
62. INSTRUMENTS & SUPPLIES	47.49	48.37	50.33	52.34	53.77	54.71	2.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	26.07	26.38	27.45	28.59	29.48	30.16	2.95
64. MISC. MANUFACTURING	99.73	101.62	105.25	108.58	110.64	111.80	2.31
65. TRANSPORTATION & WAREHOUSING	1,036.30	1,076.32	1,115.16	1,159.51	1,183.80	1,200.76	2.99
66. COMMUNICATION EXC. RADIO & TV	5.12	5.18	5.33	5.41	5.56	5.63	1.93
67. RADIO & TV BROADCASTING	0.35	0.36	0.37	0.38	0.38	0.38	1.71
68. UTILITIES	41.10	41.58	42.02	42.44	42.89	43.28	1.04
69. WHOLESALE & RETAIL TRADE	2,056.74	2,108.52	2,160.07	2,201.48	2,231.00	2,262.27	1.92
70. FINANCE & INSURANCE	6.10	6.20	6.33	6.49	6.66	6.83	2.29
71. REAL ESTATE & RENTAL	2.68	2.74	2.82	2.89	2.95	3.00	2.28
72. PERSONAL SERVICES EXC. AUTO.	378.73	377.68	378.36	379.13	379.91	379.83	0.06
73. BUSINESS SERVICES	157.03	161.45	166.48	172.48	177.48	181.38	2.93

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
142. ALL OTHER OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
74. EATING & DRINKING PLACES	26.76	27.24	27.69	27.93	28.12	28.21	1.06
75. AUTOMOBILE REPAIR & SERVICE	117.50	120.40	122.07	123.22	124.47	126.02	1.41
76. AMUSEMENTS	12.74	12.93	13.30	13.63	13.98	14.31	2.35
77. MISC. SERVICES	355.11	359.87	365.63	374.00	383.68	394.51	2.13
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	453.33	463.33	473.88	482.90	487.86	491.50	1.63
82. GOVERNMENT INDUSTRY	272.42	270.66	271.90	274.79	277.75	281.44	0.65
TOTAL, ALL INDUSTRIES	10,652.96	10,888.06	11,136.10	11,347.84	11,464.51	11,550.14	1.63

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
143. BATCH PLANT OPERATIVES  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
36. STONE & CLAY PRODUCTS	0.20	0.23	0.25	0.28	0.30	0.32	9.39
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.02	6.80
TOTAL, ALL INDUSTRIES	0.22	0.26	0.28	0.31	0.33	0.35	9.18
TOTAL EMPLOYMENT							
36. STONE & CLAY PRODUCTS	6.32	6.52	6.69	6.93	7.03	7.01	2.08
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.57	0.59	0.61	0.63	0.64	0.63	2.01
TOTAL, ALL INDUSTRIES	7.05	7.26	7.45	7.71	7.81	7.79	2.01
-----							

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
144. BLASTERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.02	0.02	0.02	0.03	0.03	0.03	8.41
6. NONFERROUS METAL MINING	0.04	0.04	0.05	0.05	0.06	0.06	11.30
7. COAL MINING	0.09	0.10	0.11	0.12	0.14	0.14	9.22
8. CRUDE PETROLEUM & N. GAS	0.07	0.08	0.08	0.08	0.09	0.09	4.04
9. STONE&CLAY MINING & QUARRYING	0.02	0.03	0.03	0.03	0.04	0.04	10.42
11. NEW CONSTRUCTION	0.04	0.04	0.05	0.05	0.06	0.06	8.05
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	7.55
82. GOVERNMENT INDUSTRY	1.00	0.97	0.99	1.01	1.03	1.03	0.69
TOTAL, ALL INDUSTRIES	1.31	1.32	1.36	1.42	1.46	1.49	2.59
TOTAL EMPLOYMENT							
5. IRON ORE MINING	0.37	0.40	0.43	0.42	0.42	0.41	2.21
6. NONFERROUS METAL MINING	0.61	0.65	0.68	0.69	0.69	0.70	2.70
7. COAL MINING	3.28	3.45	3.59	3.68	3.81	3.89	3.51
8. CRUDE PETROLEUM & N. GAS	0.97	0.97	0.96	0.94	0.93	0.93	-0.74
9. STONE&CLAY MINING & QUARRYING	0.77	0.79	0.82	0.86	0.88	0.89	2.98
11. NEW CONSTRUCTION	1.06	1.07	1.09	1.12	1.14	1.15	1.66
36. STONE & CLAY PRODUCTS	0.31	0.31	0.31	0.32	0.32	0.31	0.37
82. GOVERNMENT INDUSTRY	1.07	1.08	1.10	1.13	1.16	1.18	1.94
TOTAL, ALL INDUSTRIES	8.73	9.02	9.29	9.49	9.67	9.80	2.34

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
145. BORING MACHINE OPERATORS, WOOD  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
20. LUMBER & WOOD PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	9.37
22. HOUSEHOLD FURNITURE	0.01	0.01	0.01	0.01	0.01	0.01	3.70
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.75
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.01	0.01	0.01	6.61
TOTAL, ALL INDUSTRIES	0.06	0.06	0.07	0.07	0.08	0.08	7.14
TOTAL EMPLOYMENT							
20. LUMBER & WOOD PRODUCTS	0.96	1.04	1.09	1.13	1.15	1.14	3.53
22. HOUSEHOLD FURNITURE	2.10	2.22	2.29	2.37	2.42	2.44	3.03
23. OTHER FURNITURE & FIXTURES	0.42	0.42	0.44	0.45	0.46	0.47	2.33
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.58	0.62	0.64	0.66	0.67	0.68	3.05
TOTAL, ALL INDUSTRIES	4.42	4.66	4.83	5.00	5.10	5.14	3.05

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
146: COIL FINISHERS  
(THOUSANDS OF PERSONS)

AVG. ANN  
% GRDTH

INDUSTRY	82	83	84	85	86	87	82 TD 87
-----							
DEFENSE INDUCED EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.12	0.14	0.16	0.17	0.18	0.19	8.96
56. RADIO, TV, & COMMUNICATION EQ.	0.11	0.13	0.14	0.15	0.16	0.16	7.59
57. ELECTRONIC COMPONENTS & ACCESS.	0.68	0.80	0.91	1.01	1.11	1.16	11.36
TOTAL, ALL INDUSTRIES	0.92	1.08	1.21	1.34	1.46	1.52	10.59
TOTAL EMPLOYMENT							
53. ELECTRICAL MACHINERY	2.51	2.55	2.66	2.72	2.74	2.76	1.91
56. RADIO, TV, & COMMUNICATION EQ.	0.26	0.26	0.27	0.27	0.28	0.28	1.47
57. ELECTRONIC COMPONENTS & ACCESS.	3.09	3.22	3.38	3.52	3.62	3.69	3.64
TOTAL, ALL INDUSTRIES	6.14	6.32	6.61	6.82	6.95	7.05	2.79

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
147. CUTTERS, MACHINE  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
16. FABRIC, YARN & THREAD MILLS	0.01	0.02	0.02	0.02	0.02	0.02	5.45
17. MISC. TEXTILE GOODS	0.02	0.02	0.02	0.02	0.02	0.02	7.15
18. APPAREL	0.02	0.02	0.03	0.03	0.03	0.03	6.00
19. MISC. FABRICATED TEXTILE PROD.	0.05	0.06	0.06	0.06	0.06	0.07	4.68
24. PAPER & ALLIED PRODUCTS	0.10	0.11	0.12	0.13	0.13	0.14	6.74
25. PAPERBOARD CONTAINERS & BOXES	0.03	0.03	0.03	0.04	0.04	0.04	8.79
26. PRINTING & PUBLISHING	0.10	0.11	0.12	0.12	0.13	0.13	5.62
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.01	0.01	0.01	8.70
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.23
32. RUBBER & MISC. PLASTICS PROD.	0.06	0.06	0.07	0.08	0.09	0.09	9.95
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.02	0.02	0.02	5.73
TOTAL, ALL INDUSTRIES	0.43	0.47	0.50	0.55	0.58	0.60	6.77
TOTAL EMPLOYMENT							
16. FABRIC, YARN & THREAD MILLS	1.19	1.23	1.27	1.30	1.31	1.32	2.04
17. MISC. TEXTILE GOODS	1.18	1.23	1.28	1.32	1.34	1.35	2.75
18. APPAREL	6.27	6.32	6.46	6.58	6.58	6.58	0.97
19. MISC. FABRICATED TEXTILE PROD.	1.81	1.85	1.90	1.94	1.96	1.98	1.86
24. PAPER & ALLIED PRODUCTS	5.37	5.53	5.60	5.62	5.62	5.61	0.90
25. PAPERBOARD CONTAINERS & BOXES	1.28	1.32	1.35	1.37	1.39	1.40	1.72
26. PRINTING & PUBLISHING	6.44	6.43	6.45	6.46	6.46	6.45	0.03
28. PLASTICS & SYNTHETIC MATLS.	0.36	0.37	0.38	0.39	0.40	0.40	2.31
30. PAINTS & ALLIED PRODUCTS	0.15	0.16	0.16	0.17	0.17	0.17	3.00
32. RUBBER & MISC. PLASTICS PROD.	2.08	2.14	2.22	2.29	2.34	2.35	2.55
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.66	0.67	0.69	0.70	0.70	0.70	1.11
TOTAL, ALL INDUSTRIES	27.03	27.49	27.99	28.38	28.51	28.56	1.11

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
148. CUTTERS, PORTABLE MACHINE  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.51
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	7.14
18. APPAREL	0.04	0.05	0.05	0.05	0.06	0.06	6.00
19. MISC. FABRICATED TEXTILE PROD.	0.06	0.06	0.06	0.07	0.07	0.07	4.68
TOTAL, ALL INDUSTRIES	0.12	0.13	0.13	0.14	0.15	0.15	5.32
TOTAL EMPLOYMENT							
16. FABRIC, YARN & THREAD MILLS	0.48	0.50	0.52	0.53	0.53	0.54	2.10
17. MISC. TEXTILE GOODS	0.45	0.46	0.48	0.50	0.51	0.51	2.74
18. APPAREL	12.36	12.46	12.73	12.96	12.97	12.97	0.97
19. MISC. FABRICATED TEXTILE PROD.	1.94	1.99	2.04	2.08	2.11	2.13	1.86
TOTAL, ALL INDUSTRIES	15.64	15.82	16.19	16.50	16.55	16.57	1.17

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
 OCCUPATION BY INDUSTRY MODEL  
 ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
 149. CUTTER-FINISH OPER., RUBBER GOODS  
 (THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
32. RUBBER & MISC. PLASTICS PROD.	0.19	0.21	0.23	0.26	0.28	0.30	9.79
TOTAL, ALL INDUSTRIES	0.19	0.22	0.24	0.27	0.29	0.31	9.73
TOTAL EMPLOYMENT							
32. RUBBER & MISC. PLASTICS PROD.	6.87	7.07	7.33	7.53	7.69	7.74	2.40
TOTAL, ALL INDUSTRIES	7.06	7.26	7.53	7.74	7.90	7.95	2.40

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
 BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
150. DIE CUTTERS&CLICKING MACH. OPER.  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
18. APPAREL	0.01	0.01	0.01	0.01	0.01	0.01	6.26
19. MISC. FABRICATED TEXTILE PROO.	0.01	0.01	0.01	0.01	0.01	0.02	4.69
24. PAPER & ALLIED PRODUCTS	0.07	0.07	0.08	0.09	0.09	0.10	8.09
25. PAPERBOARD CONTAINERS & BOXES	0.05	0.06	0.06	0.07	0.07	0.08	8.78
32. RUBBER & MISC. PLASTICS PROO.	0.04	0.04	0.05	0.05	0.06	0.06	9.36
34. FOOTWEAR & OTHER LEATHER PROO.	0.02	0.02	0.02	0.03	0.03	0.03	5.11
TOTAL, ALL INDUSTRIES	0.20	0.22	0.24	0.26	0.28	0.29	7.92
TOTAL EMPLOYMENT							
18. APPAREL	1.62	1.63	1.67	1.71	1.71	1.72	1.21
19. MISC. FABRICATED TEXTILE PROO.	0.41	0.42	0.43	0.44	0.44	0.45	1.87
24. PAPER & ALLIED PRODUCTS	3.51	3.66	3.75	3.82	3.86	3.91	2.18
25. PAPERBOARD CONTAINERS & BOXES	2.27	2.33	2.38	2.43	2.45	2.47	1.72
32. RUBBER & MISC. PLASTICS PROO.	1.45	1.49	1.54	1.57	1.60	1.60	1.99
34. FOOTWEAR & OTHER LEATHER PROO.	8.12	8.13	8.15	8.12	8.04	7.97	-0.38
TOTAL, ALL INDUSTRIES	17.94	18.24	18.52	18.68	18.71	18.71	0.84
-----							

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
151. DRILLERS, HAND&MACHINE  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
5. IRON ORE MINING	0.06	0.07	0.08	0.08	0.09	0.09	8.33
6. NONFERROUS METAL MINING	0.17	0.20	0.22	0.24	0.26	0.27	10.03
7. COAL MINING	0.14	0.16	0.17	0.19	0.21	0.21	9.16
9. STONE&CLAY MINING & QUARRYING	0.07	0.08	0.09	0.10	0.11	0.12	10.66
10. CHEM&FERTILIZER MIN. MINING	0.01	0.01	0.01	0.02	0.02	0.02	7.92
11. NEW CONSTRUCTION	0.06	0.07	0.08	0.08	0.09	0.09	8.44
36. STONE & CLAY PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	8.89
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.11	0.13	0.14	0.15	0.16	0.16	7.62
TOTAL, ALL INDUSTRIES	0.65	0.74	0.81	0.89	0.95	1.00	9.12
TOTAL EMPLOYMENT							
5. IRON ORE MINING	1.20	1.29	1.39	1.38	1.36	1.33	2.15
6. NONFERROUS METAL MINING	2.91	3.04	3.14	3.19	3.14	3.14	1.53
7. COAL MINING	4.95	5.21	5.41	5.55	5.74	5.87	3.46
9. STONE&CLAY MINING & QUARRYING	2.23	2.29	2.38	2.50	2.57	2.61	3.21
10. CHEM&FERTILIZER MIN. MINING	0.59	0.60	0.62	0.64	0.65	0.65	2.02
11. NEW CONSTRUCTION	1.66	1.69	1.72	1.77	1.81	1.84	2.02
36. STONE & CLAY PRODUCTS	0.62	0.64	0.65	0.67	0.68	0.67	1.62
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	2.71	2.83	2.94	3.01	3.06	3.09	2.62
TOTAL, ALL INDUSTRIES	16.87	17.60	18.25	18.71	19.00	19.20	2.62

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
152. FILERS, GRINDERS, BUFFERS&CHIPPERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCEO EMPLOYMENT							
11. NEW CONSTRUCTION	0.02	0.02	0.02	0.03	0.03	0.03	9.40
13. ORONANCE & ACCESSORIES	0.62	0.71	0.77	0.84	0.89	0.92	8.15
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.02	0.02	0.02	4.72
32. RUBBER & MISC. PLASTICS PROO.	0.02	0.03	0.03	0.03	0.04	0.04	10.39
36. STONE & CLAY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	8.55
37. PRIMARY FERROUS METALS	0.87	0.98	1.08	1.19	1.29	1.36	9.33
38. NONFERROUS METALS	0.48	0.54	0.59	0.64	0.69	0.71	8.41
40. FAB. STRUCTURAL METAL PRODUCTS	0.48	0.55	0.59	0.64	0.68	0.72	8.25
41. SCREW MACHINE PROO.&STAMPINGS	0.19	0.21	0.23	0.25	0.27	0.28	7.69
42. OTHER FAB. METAL PRODUCTS	0.42	0.48	0.52	0.57	0.61	0.64	8.52
43. ENGINES & TURBINES	0.15	0.17	0.19	0.20	0.21	0.22	7.72
45. CONSTR. & MINING MACHINERY	0.03	0.04	0.04	0.04	0.05	0.05	8.17
46. MATERIALS HANDLING MACH. & EQ.	0.05	0.06	0.07	0.08	0.08	0.09	10.06
47. METALWORKING MACH. & EQ.	0.24	0.27	0.30	0.33	0.36	0.37	9.36
48. SPECIAL INDUSTRY MACHINERY	0.01	0.01	0.02	0.02	0.02	0.02	12.06
49. GENERAL INDUSTRY MACHINERY	0.14	0.16	0.17	0.19	0.20	0.21	7.51
50. MISC. NONELECTRICAL MACH.	0.27	0.30	0.33	0.36	0.38	0.39	7.54
51. OFFICE.COMPUTING & ACCT. MACH.	0.05	0.05	0.06	0.06	0.06	0.07	7.32
52. SERVICE INDUSTRY MACHINES	0.02	0.02	0.02	0.03	0.03	0.04	13.36
53. ELECTRICAL MACHINERY	0.07	0.08	0.09	0.10	0.11	0.11	8.98
55. ELECTRIC LIGHTING & WIRING EQ.	0.04	0.04	0.04	0.05	0.05	0.05	8.24
56. RADIO.TV. & COMMUNICATION EQ.	0.35	0.40	0.44	0.48	0.50	0.51	7.75
57. ELECTRONIC COMPONENTS & ACCESS.	0.29	0.35	0.39	0.44	0.48	0.50	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.59
59. MOTOR VEHICLES & EQUIPMENT	0.17	0.20	0.23	0.27	0.32	0.38	17.14
60. AIRCRAFT & PARTS	4.41	4.99	5.50	6.07	6.49	6.67	8.59
61. OTHER TRANSPORTATION EQ.	1.22	1.28	1.32	1.35	1.39	1.44	3.40
62. INSTRUMENTS & SUPPLIES	0.30	0.34	0.37	0.41	0.44	0.45	8.64
63. OPTICAL.OPHTHALMIC & PHOTO EQ.	0.06	0.06	0.07	0.07	0.08	0.09	8.55
64. MISC. MANUFACTURING	0.04	0.04	0.04	0.05	0.05	0.05	6.40
69. WHOLESALE & RETAIL TRAOE	0.01	0.02	0.02	0.02	0.02	0.02	9.22
72. PERSONAL SERVICES EXC. AUTO.	0.14	0.16	0.18	0.21	0.23	0.25	12.32
73. BUSINESS SERVICES	0.01	0.01	0.01	0.01	0.01	0.01	8.79
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.14	0.15	0.16	0.17	0.17	0.18	5.54
TOTAL. ALL INDUSTRIES	11.39	12.81	13.97	15.27	16.30	16.94	8.27

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
152. FILERS, GRINDERS, BUFFERS&CHIPPERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
11. NEW CONSTRUCTION	0.49	0.51	0.52	0.54	0.56	0.57	2.93
13. ORDNANCE & ACCESSORIES	1.03	1.06	1.08	1.11	1.13	1.14	2.03
23. OTHER FURNITURE & FIXTURES	0.87	0.88	0.90	0.93	0.95	0.97	2.29
32. RUBBER & MISC. PLASTICS PRDD.	0.84	0.86	0.90	0.93	0.96	0.97	2.95
36. STONE & CLAY PRODUCTS	0.32	0.33	0.34	0.34	0.35	0.34	1.30
37. PRIMARY FERROUS METALS	12.20	12.77	13.36	13.72	13.95	14.06	2.87
38. NONFERROUS METALS	5.62	5.78	5.96	6.09	6.14	6.17	1.88
40. FAB. STRUCTURAL METAL PRODUCTS	10.84	10.94	11.27	11.72	12.03	12.26	2.49
41. SCREW MACHINE PROD.&STAMPINGS	3.12	3.28	3.38	3.44	3.46	3.47	2.16
42. OTHER FAB. METAL PRODUCTS	9.23	9.40	9.70	9.90	10.01	10.14	1.89
43. ENGINES & TURBINES	1.81	1.87	1.94	1.96	1.97	1.98	1.78
45. CONSTR. & MINING MACHINERY	2.70	2.88	3.06	3.20	3.31	3.37	4.53
46. MATERIALS HANDLING MACH. & EQ.	0.97	1.01	1.08	1.13	1.17	1.20	4.51
47. METALWORKING MACH. & EQ.	4.62	4.81	5.09	5.30	5.45	5.56	3.76
48. SPECIAL INDUSTRY MACHINERY	1.79	1.83	1.92	2.00	2.05	2.09	3.21
49. GENERAL INDUSTRY MACHINERY	3.28	3.36	3.52	3.61	3.67	3.73	2.62
50. MISC. NONELECTRICAL MACH.	2.38	2.44	2.55	2.60	2.63	2.66	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	1.21	1.26	1.31	1.34	1.36	1.39	2.72
52. SERVICE INDUSTRY MACHINES	1.05	1.09	1.14	1.16	1.16	1.16	2.10
53. ELECTRICAL MACHINERY	1.43	1.46	1.52	1.55	1.57	1.58	1.93
55. ELECTRIC LIGHTING & WIRING EQ.	0.74	0.74	0.78	0.78	0.79	0.80	1.69
56. RADIO, TV, & COMMUNICATION EQ.	0.83	0.85	0.87	0.88	0.89	0.90	1.63
57. ELECTRONIC COMPONENTS & ACCESS.	1.33	1.39	1.48	1.51	1.56	1.59	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.32	0.33	0.34	0.34	0.35	0.35	2.13
59. MOTOR VEHICLES & EQUIPMENT	8.82	9.22	9.53	9.68	9.79	9.85	2.23
60. AIRCRAFT & PARTS	8.84	9.20	9.53	9.74	9.77	9.76	2.00
61. OTHER TRANSPORTATION EQ.	4.20	4.32	4.58	4.58	4.59	4.63	1.99
62. INSTRUMENTS & SUPPLIES	2.57	2.62	2.74	2.86	2.94	3.00	3.15
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.30	1.32	1.38	1.44	1.49	1.52	3.19
64. MISC. MANUFACTURING	3.47	3.53	3.66	3.78	3.85	3.89	2.35
69. WHOLESALE & RETAIL TRADE	2.42	2.48	2.55	2.61	2.65	2.69	2.20
72. PERSONAL SERVICES EXC. AUTO.	7.54	7.98	8.46	8.94	9.42	9.88	5.55
73. BUSINESS SERVICES	0.18	0.19	0.20	0.20	0.21	0.22	3.39
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.32	1.37	1.42	1.46	1.49	1.51	2.69
TOTAL, ALL INDUSTRIES	113.66	117.44	122.04	125.67	127.99	129.78	2.69

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
153. FURNACE OPER. & TENDERS, EX. METAL  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANNUAL % GROWTH
	82	83	84	85	86	87	82 TO 87
DEFENSE INDUCED EMPLOYMENT							
13. ORNANCE & ACCESSORIES	0.18	0.20	0.21	0.23	0.24	0.24	6.55
14. FOOD & KINDRED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	5.31
16. FABRIC, YARN & THREAD MILLS	0.01	0.01	0.01	0.01	0.01	0.01	5.01
20. LUMBER & WOOD PRODUCTS	0.06	0.07	0.07	0.08	0.09	0.09	8.14
21. WOOD CONTAINERS	0.01	0.01	0.01	0.01	0.01	0.01	9.81
24. PAPER & ALLIED PRODUCTS	0.05	0.05	0.05	0.05	0.05	0.05	6.33
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.77
27. CHEMICALS & PRODUCTS	0.10	0.10	0.11	0.12	0.13	0.13	6.93
28. PLASTICS & SYNTHETIC MATLS.	0.01	0.01	0.01	0.02	0.02	0.02	8.72
31. PET REFINING & REL. PROD.	0.05	0.05	0.05	0.05	0.07	0.07	5.29
32. RUBBER & MISC. PLASTICS PROD.	0.01	0.02	0.02	0.02	0.02	0.02	10.06
35. GLASS & GLASS PRODUCTS	0.04	0.05	0.05	0.05	0.05	0.05	8.46
36. STONE & CLAY PRODUCTS	0.22	0.25	0.26	0.28	0.30	0.31	7.61
37. PRIMARY FERROUS METALS	0.04	0.05	0.05	0.05	0.05	0.05	8.98
38. NONFERROUS METALS	0.03	0.04	0.04	0.05	0.05	0.05	10.25
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.51
41. SCREW MACHINE PROD. & STAMPINGS	0.01	0.01	0.01	0.01	0.01	0.01	7.72
56. RADIO, TV, & COMMUNICATION EQ.	0.04	0.05	0.05	0.05	0.05	0.05	7.87
57. ELECTRONIC COMPONENTS & ACCESS.	0.01	0.01	0.01	0.01	0.02	0.02	11.24
59. MOTOR VEHICLES & EQUIPMENT	0.01	0.01	0.01	0.01	0.01	0.01	17.13
60. AIRCRAFT & PARTS	0.09	0.10	0.11	0.13	0.13	0.14	8.54
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.02	0.02	3.65
65. TRANSPORTATION & WAREHOUSING	0.12	0.13	0.13	0.14	0.14	0.14	2.76
68. UTILITIES	0.02	0.02	0.03	0.03	0.03	0.03	6.46
71. REAL ESTATE & RENTAL	0.01	0.01	0.01	0.01	0.01	0.01	5.62
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.01	0.01	7.73
73. BUSINESS SERVICES	0.03	0.03	0.04	0.04	0.04	0.04	9.02
77. MISC. SERVICES	0.09	0.10	0.10	0.10	0.10	0.11	2.22
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.01	0.01	0.01	0.01	0.01	0.01	2.91
82. GOVERNMENT INDUSTRY	0.02	0.02	0.02	0.02	0.02	0.02	0.10
TOTAL, ALL INDUSTRIES	1.38	1.52	1.62	1.75	1.85	1.91	6.69
TOTAL EMPLOYMENT							
13. ORNANCE & ACCESSORIES	0.29	0.30	0.30	0.30	0.30	0.30	0.52
14. FOOD & KINDRED PRODUCTS	1.45	1.47	1.49	1.48	1.47	1.46	0.19
16. FABRIC, YARN & THREAD MILLS	0.66	0.68	0.69	0.71	0.71	0.71	1.62

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
153. FURNACE OPER. & TENDERS, EX. METAL  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
20. LUMBER & WOOD PRODUCTS	2.95	3.17	3.26	3.36	3.37	3.31	2.37
21. WOOD CONTAINERS	0.09	0.09	0.09	0.10	0.10	0.10	1.15
24. PAPER & ALLIED PRODUCTS	2.57	2.64	2.65	2.66	2.65	2.63	0.51
25. PAPERBOARD CONTAINERS & BOXES	0.32	0.33	0.34	0.35	0.35	0.35	1.71
27. CHEMICALS & PRODUCTS	1.99	2.01	2.03	2.03	2.03	2.03	0.46
28. PLASTICS & SYNTHETIC MATLS.	0.47	0.49	0.51	0.52	0.53	0.53	2.32
31. PET REFINING & REL. PROO.	0.97	0.96	0.97	0.98	0.98	0.98	0.35
32. RUBBER & MISC. PLASTICS PROO.	0.49	0.51	0.53	0.55	0.56	0.56	2.65
35. GLASS & GLASS PRODUCTS	1.88	1.89	1.91	1.91	1.89	1.86	-0.18
36. STONE & CLAY PRODUCTS	6.73	6.82	6.89	7.02	7.01	6.88	0.42
37. PRIMARY FERROUS METALS	0.59	0.60	0.62	0.62	0.62	0.61	0.66
38. NONFERROUS METALS	0.40	0.42	0.44	0.46	0.47	0.48	3.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.14	0.14	0.14	0.15	0.15	0.16	2.73
41. SCREW MACHINE PROO. & STAMPINGS	0.15	0.16	0.17	0.17	0.17	0.17	2.19
56. RADIO, TV, & COMMUNICATION EQ.	0.10	0.10	0.11	0.11	0.11	0.11	1.73
57. ELECTRONIC COMPONENTS & ACCESS.	0.04	0.04	0.05	0.05	0.05	0.05	3.53
59. MOTOR VEHICLES & EQUIPMENT	0.33	0.35	0.36	0.37	0.37	0.37	2.22
60. AIRCRAFT & PARTS	0.18	0.19	0.20	0.20	0.20	0.20	1.95
61. OTHER TRANSPORTATION EQ.	0.05	0.05	0.05	0.05	0.05	0.05	2.24
65. TRANSPORTATION & WAREHOUSING	2.91	2.93	2.94	2.96	2.93	2.89	-0.12
68. UTILITIES	1.04	1.04	1.05	1.05	1.06	1.06	0.49
71. REAL ESTATE & RENTAL	0.22	0.22	0.22	0.22	0.22	0.21	-0.59
72. PERSONAL SERVICES EXC. AUTO.	0.28	0.28	0.28	0.29	0.29	0.29	1.23
73. BUSINESS SERVICES	0.59	0.61	0.63	0.66	0.68	0.70	3.61
77. MISC. SERVICES	14.68	14.60	14.56	14.63	14.75	14.90	0.30
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.25	0.26	0.26	0.26	0.26	0.26	0.49
82. GOVERNMENT INDUSTRY	7.97	7.78	7.68	7.62	7.56	7.55	-1.08
TOTAL, ALL INDUSTRIES	54.80	55.25	55.63	56.10	56.21	56.15	0.49

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
154. WINDING OPERATORS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
24. PAPER & ALLIED PRODUCTS	0.20	0.22	0.24	0.26	0.27	0.28	6.48
25. PAPERBOARD CONTAINERS & BOXES	0.04	0.05	0.05	0.06	0.06	0.06	8.78
31. PET REFINING & REL. PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.43
32. RUBBER & MISC. PLASTICS PRDD.	0.01	0.01	0.02	0.02	0.02	0.02	10.45
36. STONE & CLAY PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	8.18
42. OTHER FAB. METAL PRDDUCTS	0.16	0.18	0.20	0.23	0.24	0.26	10.15
46. MATERIALS HANDLING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.12
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.29
49. GENERAL INDUSTRY MACHINERY	0.04	0.05	0.05	0.06	0.06	0.06	7.51
50. MISC. NONELECTRICAL MACH.	0.01	0.01	0.01	0.01	0.01	0.02	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.34
53. ELECTRICAL MACHINERY	0.41	0.47	0.51	0.56	0.60	0.62	8.64
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.03	0.03	0.04	0.04	8.25
56. RADIO, TV, & COMMUNICATION EQ.	1.73	1.99	2.18	2.37	2.49	2.55	8.09
57. ELECTRONIC COMPONENTS & ACCESS.	1.97	2.34	2.63	2.95	3.21	3.37	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.03	0.03	0.03	0.04	0.04	0.04	9.57
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.04	0.04	0.05	0.05	0.05	0.05	6.19
TOTAL, ALL INDUSTRIES	4.74	5.50	6.09	6.71	7.20	7.47	9.54
TOTAL EMPLOYMENT							
24. PAPER & ALLIED PRODUCTS	10.88	11.19	11.29	11.31	11.28	11.24	0.65
25. PAPERBOARD CONTAINERS & BOXES	1.92	1.97	2.02	2.06	2.08	2.09	1.72
31. PET REFINING & REL. PRDD.	0.19	0.19	0.19	0.19	0.19	0.18	-0.47
32. RUBBER & MISC. PLASTICS PRDD.	0.45	0.47	0.49	0.51	0.52	0.53	3.02
36. STONE & CLAY PRODUCTS	0.38	0.39	0.40	0.41	0.41	0.40	0.95
42. OTHER FAB. METAL PRDDUCTS	3.48	3.61	3.78	3.91	4.02	4.12	3.42
46. MATERIALS HANDLING MACH. & EQ.	0.12	0.12	0.13	0.13	0.14	0.14	3.62
47. METALWORKING MACH. & EQ.	0.14	0.15	0.15	0.16	0.17	0.17	3.70
49. GENERAL INDUSTRY MACHINERY	0.98	1.01	1.06	1.08	1.10	1.12	2.62
50. MISC. NONELECTRICAL MACH.	0.09	0.09	0.10	0.10	0.10	0.10	2.22
51. OFFICE, COMPUTING & ACCT. MACH.	0.25	0.26	0.28	0.28	0.29	0.29	2.75
53. ELECTRICAL MACHINERY	8.28	8.38	8.72	8.88	8.94	8.97	1.62
55. ELECTRIC LIGHTING & WIRING EQ.	0.55	0.55	0.56	0.58	0.59	0.59	1.70
56. RADIO, TV, & COMMUNICATION EQ.	4.09	4.18	4.32	4.39	4.43	4.50	1.94
57. ELECTRONIC COMPONENTS & ACCESS.	8.97	9.36	9.82	10.22	10.51	10.73	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.98	1.02	1.06	1.07	1.08	1.09	2.12

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
154. WINDING OPERATORS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY							AVG. ANN % GROWTH
	82	83	84	85	86	87	82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.38	0.39	0.40	0.41	0.41	0.42	2.09
TOTAL, ALL INDUSTRIES	43.61	44.83	46.32	47.30	47.89	48.36	2.09

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
155. WIRERS, ELECTRONIC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
-----							
DEFENSE INDUCED EMPLOYMENT							
53. ELECTRICAL MACHINERY	0.18	0.20	0.22	0.24	0.25	0.26	8.45
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.04	0.04	0.04	0.04	8.24
56. RADIO, TV, & COMMUNICATION EQ.	5.38	6.19	6.81	7.39	7.79	7.98	8.22
57. ELECTRONIC COMPONENTS & ACCESS.	0.95	1.13	1.27	1.42	1.55	1.62	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.04	0.05	0.05	0.05	0.06	0.06	9.57
62. INSTRUMENTS & SUPPLIES	0.34	0.39	0.42	0.46	0.49	0.51	8.13
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.04	0.05	0.05	0.06	0.06	0.07	8.63
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.02	0.02	0.02	0.02	0.02	0.02	4.81
TOTAL, ALL INDUSTRIES	6.98	8.05	8.88	9.69	10.28	10.57	8.67
TOTAL EMPLOYMENT							
53. ELECTRICAL MACHINERY	3.54	3.58	3.71	3.78	3.79	3.80	1.44
55. ELECTRIC LIGHTING & WIRING EQ.	0.63	0.64	0.65	0.67	0.68	0.69	1.69
56. RADIO, TV, & COMMUNICATION EQ.	12.73	13.04	13.46	13.71	13.85	14.09	2.06
57. ELECTRONIC COMPONENTS & ACCESS.	4.32	4.51	4.73	4.92	5.07	5.17	3.65
58. MISC. ELECTRICAL MACH. & EQ.	1.45	1.50	1.56	1.58	1.60	1.61	2.12
62. INSTRUMENTS & SUPPLIES	2.96	3.01	3.13	3.25	3.33	3.38	2.67
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.03	1.04	1.09	1.14	1.18	1.21	3.26
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.08	0.09	0.09	0.09	0.09	0.10	2.35
TOTAL, ALL INDUSTRIES	26.88	27.54	28.57	29.28	29.73	30.20	2.35

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
156. OPERATIVES, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.06	0.06	0.06	0.06	0.06	0.06	2.60
2. OTHER AGRICULTURAL PRODUCTS	0.10	0.10	0.10	0.10	0.11	0.11	2.47
3. FORESTRY & FISHERY PRODUCTS	0.06	0.07	0.07	0.08	0.08	0.09	5.96
4. AGR., FORESTRY, & FISHERY SERV.	0.18	0.20	0.21	0.22	0.24	0.25	6.14
5. IRON ORE MINING	0.41	0.48	0.52	0.56	0.58	0.60	7.76
6. NONFERROUS METAL MINING	0.82	0.96	1.07	1.19	1.30	1.38	11.03
7. COAL MINING	2.11	2.39	2.61	2.84	3.09	3.23	8.91
8. CRUDE PETROLEUM & N. GAS	8.74	9.28	9.57	10.07	10.54	10.60	3.93
9. STONE & CLAY MINING & QUARRYING	0.92	1.04	1.13	1.28	1.39	1.48	9.87
10. CHEM & FERTILIZER MIN. MINING	0.13	0.14	0.15	0.17	0.18	0.19	7.91
11. NEW CONSTRUCTION	5.59	6.33	6.81	7.53	8.11	8.52	8.80
13. ORDNANCE & ACCESSORIES	10.95	12.39	13.52	14.62	15.44	16.03	7.93
14. FOOD & KINDRED PRODUCTS	5.32	5.76	6.05	6.39	6.63	6.77	4.96
15. TOBACCO MANUFACTURES	0.03	0.04	0.04	0.04	0.04	0.04	7.16
16. FABRIC, YARN & THREAD MILLS	3.20	3.42	3.58	3.78	3.96	4.06	4.90
17. MISC. TEXTILE GOODS	0.74	0.80	0.86	0.94	1.00	1.04	7.17
18. APPAREL	3.17	3.36	3.53	3.78	4.03	4.25	6.03
19. MISC. FABRICATED TEXTILE PROD.	2.88	3.05	3.18	3.38	3.50	3.63	4.72
20. LUMBER & WOOD PRODUCTS	3.35	3.79	4.09	4.46	4.85	5.14	8.95
21. WOOD CONTAINERS	0.95	1.09	1.20	1.32	1.44	1.52	9.82
22. HOUSEHOLD FURNITURE	0.60	0.64	0.69	0.71	0.73	0.72	3.70
23. OTHER FURNITURE & FIXTURES	0.60	0.62	0.65	0.68	0.72	0.75	4.70
24. PAPER & ALLIED PRODUCTS	3.09	3.40	3.68	3.94	4.15	4.29	6.78
25. PAPERBOARD CONTAINERS & BOXES	1.79	2.00	2.19	2.41	2.59	2.71	8.61
26. PRINTING & PUBLISHING	3.43	3.69	3.91	4.18	4.35	4.44	5.27
27. CHEMICALS & PRODUCTS	5.97	6.55	7.00	7.56	8.09	8.44	7.19
28. PLASTICS & SYNTHETIC MATLS.	1.73	1.93	2.12	2.33	2.50	2.60	8.45
29. DRUGS, CLEANING & TOILET PREP.	0.25	0.26	0.27	0.28	0.29	0.30	3.53
30. PAINTS & ALLIED PRODUCTS	0.90	0.99	1.07	1.17	1.26	1.32	7.97
31. PET REFINING & REL. PROD.	2.11	2.23	2.35	2.50	2.62	2.69	4.95
32. RUBBER & MISC. PLASTICS PROD.	8.68	9.80	10.91	12.24	13.40	14.15	10.28
33. LEATHER TANNING & FINISHING	0.05	0.05	0.05	0.05	0.06	0.06	5.38
34. FOOTWEAR & OTHER LEATHER PROD.	0.29	0.32	0.33	0.36	0.37	0.38	5.43
35. GLASS & GLASS PRODUCTS	1.74	1.96	2.15	2.38	2.57	2.73	9.41
36. STONE & CLAY PRODUCTS	5.07	5.79	6.23	6.89	7.40	7.78	8.95
37. PRIMARY FERROUS METALS	7.55	8.41	9.10	9.93	10.59	11.06	7.94
38. NONFERROUS METALS	8.29	9.52	10.48	11.57	12.48	13.08	9.55

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
156. OPERATIVES, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
39. METAL CONTAINERS	0.29	0.31	0.33	0.35	0.38	0.40	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	3.07	3.46	3.70	3.98	4.22	4.46	7.74
41. SCREW MACHINE PROD.&STAMPINGS	2.38	2.66	2.87	3.13	3.33	3.47	7.80
42. OTHER FAB. METAL PRODUCTS	2.80	3.19	3.49	3.85	4.15	4.37	9.33
43. ENGINES & TURBINES	0.68	0.76	0.83	0.88	0.92	0.96	7.19
44. FARM & GARDEN MACHINERY	0.04	0.05	0.05	0.05	0.06	0.06	7.29
45. CONSTR. & MINING MACHINERY	0.19	0.21	0.23	0.25	0.26	0.27	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.33	0.38	0.41	0.45	0.49	0.51	9.12
47. METALWORKING MACH. & EQ.	0.75	0.85	0.93	1.02	1.09	1.13	8.63
48. SPECIAL INDUSTRY MACHINERY	0.12	0.13	0.15	0.17	0.19	0.20	11.23
49. GENERAL INDUSTRY MACHINERY	0.73	0.81	0.87	0.93	0.99	1.02	7.05
50. MISC. NONELECTRICAL MACH.	1.07	1.16	1.26	1.38	1.45	1.49	6.81
51. OFFICE, COMPUTING & ACCT. MACH.	0.41	0.47	0.50	0.54	0.56	0.57	6.65
52. SERVICE INDUSTRY MACHINES	0.24	0.28	0.30	0.35	0.40	0.44	13.37
53. ELECTRICAL MACHINERY	1.39	1.59	1.73	1.90	2.05	2.14	9.01
54. HOUSEHOLD APPLIANCES	0.05	0.05	0.06	0.06	0.07	0.07	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	1.20	1.34	1.44	1.57	1.68	1.75	7.93
56. RADIO, TV, & COMMUNICATION EQ.	12.60	14.38	15.69	16.89	17.65	17.93	7.30
57. ELECTRONIC COMPONENTS & ACCESS.	9.11	10.74	11.99	13.30	14.39	14.96	10.44
58. MISC. ELECTRICAL MACH. & EQ.	0.61	0.70	0.76	0.84	0.91	0.96	9.57
59. MOTOR VEHICLES & EQUIPMENT	2.46	2.93	3.33	3.96	4.64	5.42	17.14
60. AIRCRAFT & PARTS	14.59	16.41	17.97	19.71	20.96	21.40	7.96
61. OTHER TRANSPORTATION EQ.	7.99	8.43	8.70	8.88	9.17	9.45	3.42
62. INSTRUMENTS & SUPPLIES	4.88	5.50	6.01	6.59	7.02	7.28	8.33
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	1.03	1.13	1.22	1.35	1.45	1.53	8.28
64. MISC. MANUFACTURING	1.06	1.16	1.23	1.33	1.40	1.44	6.36
65. TRANSPORTATION & WAREHOUSING	43.93	47.17	50.02	53.86	56.81	58.68	5.96
66. COMMUNICATION EXC. RADIO & TV	0.13	0.13	0.14	0.15	0.16	0.17	5.65
67. RADIO & TV BROADCASTING	0.01	0.01	0.01	0.01	0.01	0.01	8.15
68. UTILITIES	0.86	0.95	1.03	1.12	1.18	1.21	7.06
69. WHOLESALE & RETAIL TRADE	12.57	14.13	15.49	17.08	18.39	19.27	8.92
70. FINANCE & INSURANCE	0.05	0.06	0.06	0.07	0.08	0.08	9.38
71. REAL ESTATE & RENTAL	0.07	0.08	0.08	0.09	0.10	0.10	8.93
72. PERSONAL SERVICES EXC. AUTO.	6.80	7.49	7.98	8.56	8.98	9.25	6.34
73. BUSINESS SERVICES	7.58	8.48	9.28	10.20	10.90	11.30	8.30
74. EATING & DRINKING PLACES	0.41	0.47	0.53	0.58	0.63	0.66	9.76
75. AUTOMOBILE REPAIR & SERVICE	1.70	1.89	2.05	2.23	2.38	2.47	7.75
76. AMUSEMENTS	0.12	0.14	0.15	0.16	0.18	0.19	8.54
77. MISC. SERVICES	2.20	2.26	2.36	2.50	2.63	2.69	4.16

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
156. OPERATIVES, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	15.05	16.13	17.12	18.24	19.00	19.41	5.22
82. GOVERNMENT INDUSTRY	33.60	33.05	33.80	34.85	35.54	35.90	1.33
TOTAL, ALL INDUSTRIES	296.95	324.42	347.70	375.43	397.57	411.54	6.74
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	9.08	9.16	9.01	8.85	8.79	8.72	-0.80
2. OTHER AGRICULTURAL PRODUCTS	65.39	65.45	65.57	65.15	64.81	64.53	-0.27
3. FORESTRY & FISHERY PRODUCTS	2.53	2.67	2.85	2.97	2.97	2.94	3.00
4. AGR., FORESTRY, & FISHERY SERV.	9.89	10.09	10.13	10.28	10.34	10.44	1.08
5. IRON ORE MINING	8.11	8.69	9.29	9.18	8.99	8.78	1.60
6. NONFERROUS METAL MINING	14.06	14.85	15.45	15.85	15.76	15.87	2.44
7. COAL MINING	75.34	79.06	81.89	83.81	86.48	88.27	3.22
8. CRUDE PETROLEUM & N. GAS	118.47	118.03	117.46	114.93	113.00	113.59	-0.84
9. STONE & CLAY MINING & QUARRYING	29.37	29.96	30.95	32.23	32.92	33.19	2.48
10. CHEM & FERTILIZER MIN. MINING	6.36	6.52	6.74	6.90	6.96	7.02	2.01
11. NEW CONSTRUCTION	148.71	152.05	155.35	160.51	164.61	167.12	2.36
13. ORNANCE & ACCESSORIES	18.11	18.54	18.88	19.33	19.60	19.82	1.82
14. FOOD & KINDRED PRODUCTS	795.96	805.91	809.83	806.02	797.22	789.84	-0.15
15. TOBACCO MANUFACTURES	26.21	26.22	25.89	25.48	25.20	24.74	-1.15
16. FABRIC, YARN & THREAD MILLS	256.53	263.58	270.07	274.83	276.73	276.55	1.51
17. MISC. TEXTILE GOODS	50.68	52.64	54.84	56.68	57.66	58.11	2.77
18. APPAREL	880.27	887.32	907.16	923.99	924.82	924.94	0.99
19. MISC. FABRICATED TEXTILE PROD.	97.76	100.26	103.00	105.01	106.30	107.37	1.89
20. LUMBER & WOOD PRODUCTS	161.88	175.25	181.94	188.73	190.63	188.88	3.13
21. WOOD CONTAINERS	15.93	15.90	16.20	16.61	16.78	16.87	1.16
22. HOUSEHOLD FURNITURE	103.44	109.09	112.66	116.44	118.98	120.09	3.03
23. OTHER FURNITURE & FIXTURES	37.63	37.94	39.16	40.36	41.24	42.12	2.28
24. PAPER & ALLIED PRODUCTS	166.05	171.19	173.22	174.02	174.06	174.02	0.94
25. PAPERBOARD CONTAINERS & BOXES	81.48	83.54	85.33	86.82	87.64	88.03	1.56
26. PRINTING & PUBLISHING	218.64	217.82	217.44	217.25	216.33	215.32	-0.31
27. CHEMICALS & PRODUCTS	123.95	125.74	127.14	127.88	128.14	128.34	0.70
28. PLASTICS & SYNTHETIC MATLS.	71.68	74.15	76.70	78.44	79.31	79.42	2.07
29. DRUGS, CLEANING & TOILET PREP.	70.53	70.57	71.21	71.65	71.25	71.04	0.14
30. PAINTS & ALLIED PRODUCTS	17.05	17.82	18.41	19.00	19.34	19.53	2.75
31. PET REFINING & REL. PROD.	39.22	39.07	39.20	39.45	39.41	39.27	0.02
32. RUBBER & MISC. PLASTICS PROD.	318.77	329.51	343.31	354.39	363.38	366.99	2.86
33. LEATHER TANNING & FINISHING	8.69	8.99	9.28	9.30	9.29	9.27	1.29
34. FOOTWEAR & OTHER LEATHER PROD.	112.29	112.77	113.45	113.29	112.56	111.88	-0.07

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
156. OPERATIVES, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
35. GLASS & GLASS PRODUCTS	78.95	80.41	81.92	82.67	82.40	81.76	0.70
36. STONE & CLAY PRODUCTS	156.94	161.10	164.80	169.85	171.63	170.49	1.67
37. PRIMARY FERROUS METALS	105.89	109.25	112.79	114.30	114.84	114.44	1.57
38. NONFERROUS METALS	97.94	101.78	106.13	109.46	111.45	113.23	2.95
39. METAL CONTAINERS	19.51	19.24	19.28	19.62	19.75	19.86	0.36
40. FAB. STRUCTURAL METAL PRODUCTS	68.78	69.02	70.79	73.23	74.86	75.93	2.00
41. SCREW MACHINE PROD.&STAMPINGS	38.79	40.81	42.17	42.93	43.19	43.40	2.27
42. OTHER FAB. METAL PRODUCTS	60.87	62.51	65.01	66.81	68.07	69.39	2.66
43. ENGINES & TURBINES	8.12	8.34	8.61	8.66	8.66	8.66	1.28
44. FARM & GARDEN MACHINERY	12.53	12.75	13.30	13.38	13.44	13.49	1.50
45. CONSTR. & MINING MACHINERY	16.20	17.13	18.02	18.66	19.16	19.37	3.64
46. MATERIALS HANDLING MACH. & EQ.	5.79	5.98	6.34	6.60	6.78	6.92	3.62
47. METALWORKING MACH. & EQ.	14.48	14.96	15.74	16.27	16.63	16.84	3.07
48. SPECIAL INDUSTRY MACHINERY	16.00	16.22	16.90	17.52	17.82	18.06	2.45
49. GENERAL INDUSTRY MACHINERY	16.60	16.93	17.65	18.04	18.27	18.49	2.18
50. MISC. NONELECTRICAL MACH.	9.36	9.53	9.87	10.02	10.05	10.10	1.54
51. OFFICE, COMPUTING & ACCT. MACH.	10.92	11.27	11.67	11.81	11.90	12.11	2.09
52. SERVICE INDUSTRY MACHINES	13.08	13.60	14.25	14.48	14.51	14.52	2.10
53. ELECTRICAL MACHINERY	27.90	28.36	29.61	30.26	30.56	30.75	1.97
54. HOUSEHOLD APPLIANCES	19.09	19.61	20.15	20.83	21.28	21.58	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	25.04	25.12	25.71	26.25	26.57	26.84	1.40
56. RADIO, TV, & COMMUNICATION EQ.	29.84	30.30	31.02	31.32	31.38	31.67	1.20
57. ELECTRONIC COMPONENTS & ACCESS.	41.57	42.96	44.72	46.14	47.08	47.69	2.79
58. MISC. ELECTRICAL MACH. & EQ.	22.38	23.16	24.08	24.36	24.66	24.86	2.12
59. MOTOR VEHICLES & EQUIPMENT	127.04	132.81	137.32	139.52	141.05	141.85	2.23
60. AIRCRAFT & PARTS	29.22	30.21	30.86	31.64	31.53	31.33	1.40
61. OTHER TRANSPORTATION EQ.	27.57	28.41	29.43	30.08	30.17	30.45	2.00
62. INSTRUMENTS & SUPPLIES	41.91	42.68	44.41	46.18	47.45	48.27	2.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	23.71	23.98	24.95	25.98	26.78	27.39	2.93
64. MISC. MANUFACTURING	95.89	97.70	101.18	104.39	106.36	107.47	2.31
65. TRANSPORTATION & WAREHOUSING	1,033.34	1,073.33	1,112.16	1,156.47	1,180.79	1,197.80	3.00
66. COMMUNICATION EXC. RADIO & TV	5.12	5.18	5.33	5.41	5.56	5.63	1.93
67. RADIO & TV BROADCASTING	0.35	0.36	0.37	0.38	0.38	0.38	1.71
68. UTILITIES	40.06	40.53	40.96	41.38	41.83	42.21	1.05
69. WHOLESALE & RETAIL TRADE	2,054.25	2,105.96	2,157.44	2,198.80	2,228.28	2,259.50	1.92
70. FINANCE & INSURANCE	5.90	6.00	6.13	6.29	6.45	6.61	2.30
71. REAL ESTATE & RENTAL	2.46	2.52	2.60	2.67	2.73	2.78	2.52
72. PERSONAL SERVICES EXC. AUTO.	370.91	369.42	369.62	369.90	370.21	369.66	-0.07
73. BUSINESS SERVICES	156.26	160.66	165.66	171.62	176.59	180.46	2.92

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
156. OPERATIVES, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
74. EATING & DRINKING PLACES	26.76	27.24	27.69	27.93	28.12	28.21	1.06
75. AUTOMOBILE REPAIR & SERVICE	117.40	120.30	121.97	123.12	124.37	125.92	1.41
76. AMUSEMENTS	12.74	12.93	13.30	13.63	13.98	14.31	2.35
77. MISC. SERVICES	340.40	345.24	351.04	359.34	368.91	379.57	2.20
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	446.35	456.16	466.45	475.27	480.12	483.69	1.62
82. GOVERNMENT INDUSTRY	263.28	261.73	263.07	266.02	269.03	272.73	0.71
TOTAL, ALL INDUSTRIES	10,303.94	10,530.20	10,767.77	10,971.41	11,083.44	11,165.87	1.62

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
157. SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANNUAL % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	2.61
2. OTHER AGRICULTURAL PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	2.78
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.02	0.02	0.02	5.99
4. AGR., FORESTRY, & FISHERY SERV.	0.04	0.04	0.04	0.05	0.05	0.05	6.86
5. IRON ORE MINING	0.03	0.03	0.03	0.03	0.04	0.04	8.14
6. NONFERROUS METAL MINING	0.07	0.08	0.09	0.10	0.11	0.11	11.06
7. COAL MINING	0.06	0.07	0.08	0.08	0.09	0.10	9.18
8. CRUDE PETROLEUM & N. GAS	0.25	0.27	0.28	0.29	0.30	0.31	3.89
9. STONE & CLAY MINING & QUARRYING	0.04	0.04	0.05	0.05	0.06	0.06	10.05
11. NEW CONSTRUCTION	1.34	1.52	1.64	1.81	1.96	2.06	8.93
13. ORNANCE & ACCESSORIES	4.55	5.13	5.58	6.01	6.32	6.55	7.53
14. FOOD & KINDRED PRODUCTS	0.44	0.48	0.50	0.53	0.55	0.56	5.13
16. FABRIC, YARN & THREAD MILLS	0.11	0.11	0.12	0.13	0.13	0.13	4.84
17. MISC. TEXTILE GOODS	0.03	0.04	0.04	0.04	0.04	0.05	7.17
18. APPAREL	0.06	0.06	0.07	0.07	0.08	0.08	6.04
19. MISC. FABRICATED TEXTILE PROD.	0.08	0.08	0.08	0.09	0.09	0.10	4.69
20. LUMBER & WOOD PRODUCTS	0.20	0.23	0.25	0.27	0.30	0.31	9.02
21. WOOD CONTAINERS	0.03	0.03	0.04	0.04	0.04	0.04	9.79
22. HOUSEHOLD FURNITURE	0.03	0.03	0.03	0.03	0.04	0.04	3.70
23. OTHER FURNITURE & FIXTURES	0.04	0.04	0.05	0.05	0.05	0.05	4.67
24. PAPER & ALLIED PRODUCTS	0.16	0.18	0.19	0.21	0.22	0.23	6.80
25. PAPERBOARD CONTAINERS & BOXES	0.05	0.06	0.06	0.07	0.07	0.08	7.93
26. PRINTING & PUBLISHING	0.33	0.36	0.38	0.41	0.43	0.44	5.97
27. CHEMICALS & PRODUCTS	0.48	0.53	0.57	0.62	0.66	0.69	7.57
28. PLASTICS & SYNTHETIC MATLS.	0.08	0.09	0.10	0.11	0.12	0.13	8.70
29. DRUGS, CLEANING & TOILET PREP.	0.04	0.04	0.04	0.04	0.04	0.04	3.69
30. PAINTS & ALLIED PRODUCTS	0.05	0.06	0.06	0.07	0.07	0.08	8.19
31. PET REFINING & REL. PROD.	0.14	0.15	0.16	0.17	0.18	0.18	5.32
32. RUBBER & MISC. PLASTICS PROD.	0.28	0.31	0.35	0.39	0.43	0.45	10.19
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.01	0.01	4.98
35. GLASS & GLASS PRODUCTS	0.07	0.08	0.09	0.11	0.11	0.12	10.49
36. STONE & CLAY PRODUCTS	0.18	0.21	0.22	0.25	0.26	0.28	8.54
37. PRIMARY FERROUS METALS	0.86	0.95	1.03	1.12	1.19	1.24	7.74
38. NONFERROUS METALS	0.58	0.67	0.74	0.81	0.87	0.92	9.40
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.39	0.44	0.47	0.51	0.54	0.57	7.77
41. SCREW MACHINE PROD. & STAMPINGS	0.38	0.43	0.46	0.50	0.53	0.56	7.70

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
157. SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
42. OTHER FAB. METAL PRODUCTS	0.25	0.29	0.32	0.35	0.38	0.40	9.53
43. ENGINES & TURBINES	0.16	0.18	0.20	0.21	0.22	0.23	7.71
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.31
45. CONSTR. & MINING MACHINERY	0.04	0.05	0.05	0.06	0.06	0.06	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.07	0.08	0.09	0.10	0.11	0.11	9.12
47. METALWORKING MACH. & EQ.	0.34	0.39	0.43	0.48	0.51	0.53	9.36
48. SPECIAL INDUSTRY MACHINERY	0.02	0.02	0.03	0.03	0.03	0.04	12.08
49. GENERAL INDUSTRY MACHINERY	0.21	0.23	0.25	0.27	0.29	0.30	7.52
50. MISC. NONELECTRICAL MACH.	0.52	0.56	0.62	0.68	0.72	0.74	7.53
51. OFFICE, COMPUTING & ACCT. MACH.	0.16	0.19	0.20	0.22	0.23	0.23	7.32
52. SERVICE INDUSTRY MACHINES	0.05	0.05	0.06	0.07	0.08	0.09	13.36
53. ELECTRICAL MACHINERY	0.20	0.23	0.26	0.28	0.30	0.32	9.08
54. HOUSEHOLD APPLIANCES	0.01	0.01	0.01	0.01	0.01	0.01	9.50
55. ELECTRIC LIGHTING & WIRING EQ.	0.14	0.16	0.17	0.18	0.20	0.21	8.25
56. RADIO, TV, & COMMUNICATION EQ.	3.77	4.33	4.76	5.16	5.43	5.55	8.06
57. ELECTRONIC COMPONENTS & ACCESS.	1.45	1.72	1.94	2.17	2.36	2.48	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.08	0.09	0.10	0.11	0.12	0.13	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.47	0.56	0.64	0.76	0.89	1.04	17.14
60. AIRCRAFT & PARTS	5.19	5.87	6.47	7.14	7.64	7.84	8.59
61. OTHER TRANSPORTATION EQ.	1.14	1.20	1.24	1.26	1.30	1.34	3.33
62. INSTRUMENTS & SUPPLIES	0.80	0.90	0.99	1.08	1.15	1.19	8.31
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.16	0.17	0.19	0.21	0.22	0.24	8.53
64. MISC. MANUFACTURING	0.06	0.07	0.07	0.07	0.08	0.08	5.87
65. TRANSPORTATION & WAREHOUSING	5.16	5.48	5.75	6.12	6.39	6.54	4.85
66. COMMUNICATION EXC. RADIO & TV	0.35	0.38	0.40	0.43	0.45	0.46	5.45
67. RADIO & TV BROADCASTING	0.06	0.07	0.08	0.09	0.09	0.10	8.18
68. UTILITIES	0.37	0.40	0.43	0.46	0.48	0.49	5.68
69. WHOLESALE & RETAIL TRADE	4.13	4.68	5.13	5.68	6.14	6.45	9.35
70. FINANCE & INSURANCE	0.68	0.78	0.86	0.96	1.04	1.10	9.91
71. REAL ESTATE & RENTAL	3.38	3.71	3.99	4.31	4.55	4.67	6.65
72. PERSONAL SERVICES EXC. AUTO.	28.60	32.21	35.05	38.39	41.08	43.19	8.59
73. BUSINESS SERVICES	34.13	38.43	42.27	46.74	50.22	52.33	8.92
74. EATING & DRINKING PLACES	76.43	87.43	97.16	107.67	116.12	121.08	9.84
75. AUTOMOBILE REPAIR & SERVICE	0.11	0.12	0.13	0.15	0.16	0.16	7.67
76. AMUSEMENTS	3.47	3.84	4.18	4.60	4.95	5.25	8.60
77. MISC. SERVICES	29.41	30.48	31.96	34.14	36.02	37.16	4.79
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	29.18	26.83	28.57	30.54	31.93	32.76	5.40
82. GOVERNMENT INDUSTRY	38.05	37.54	38.50	39.81	40.71	41.23	1.62
TOTAL, ALL INDUSTRIES	276.40	302.66	327.51	356.15	378.78	392.87	7.29

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## TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
157. SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	2.16	2.18	2.15	2.11	2.10	2.08	-0.80
2. OTHER AGRICULTURAL PRODUCTS	15.66	15.72	15.80	15.74	15.71	15.69	0.04
3. FORESTRY & FISHERY PRODUCTS	0.50	0.53	0.57	0.59	0.59	0.58	3.03
4. AGR., FORESTRY, & FISHERY SERV.	2.06	2.12	2.14	2.18	2.21	2.25	1.76
5. IRON ORE MINING	0.50	0.54	0.57	0.57	0.56	0.55	1.96
6. NONFERROUS METAL MINING	1.14	1.21	1.26	1.29	1.28	1.29	2.48
7. COAL MINING	2.21	2.33	2.42	2.48	2.56	2.62	3.48
8. CRUDE PETROLEUM & N. GAS	3.43	3.41	3.39	3.32	3.26	3.28	-0.88
9. STONE & CLAY MINING & QUARRYING	1.21	1.23	1.28	1.33	1.36	1.37	2.64
11. NEW CONSTRUCTION	35.68	36.53	37.37	38.65	39.68	40.33	2.48
13. ORDNANCE & ACCESSORIES	7.53	7.68	7.79	7.95	8.03	8.09	1.44
14. FOOD & KINDRED PRODUCTS	65.78	66.71	67.15	66.94	66.32	65.82	0.01
16. FABRIC, YARN & THREAD MILLS	8.49	8.72	8.93	9.08	9.14	9.13	1.46
17. MISC. TEXTILE GOODS	2.27	2.36	2.45	2.54	2.58	2.60	2.77
18. APPAREL	16.76	16.90	17.28	17.60	17.62	17.62	1.00
19. MISC. FABRICATED TEXTILE PROD.	2.61	2.67	2.75	2.80	2.83	2.86	1.86
20. LUMBER & WOOD PRODUCTS	9.84	10.66	11.07	11.49	11.62	11.52	3.20
21. WOOD CONTAINERS	0.46	0.46	0.47	0.48	0.49	0.49	1.13
22. HOUSEHOLD FURNITURE	5.03	5.30	5.48	5.66	5.78	5.84	3.03
23. OTHER FURNITURE & FIXTURES	2.68	2.71	2.79	2.88	2.94	3.00	2.25
24. PAPER & ALLIED PRODUCTS	8.71	8.98	9.09	9.13	9.13	9.13	0.96
25. PAPERBOARD CONTAINERS & BOXES	2.38	2.43	2.46	2.49	2.50	2.49	0.92
26. PRINTING & PUBLISHING	21.13	21.18	21.31	21.43	21.48	21.52	0.36
27. CHEMICALS & PRODUCTS	10.01	10.19	10.34	10.44	10.50	10.55	1.06
28. PLASTICS & SYNTHETIC MATLS.	3.42	3.55	3.68	3.77	3.82	3.84	2.31
29. DRUGS, CLEANING & TOILET PREP.	10.02	10.04	10.15	10.23	10.19	10.17	0.30
30. PAINTS & ALLIED PRODUCTS	1.00	1.05	1.08	1.12	1.14	1.16	2.96
31. PET REFINING & REL. PROD.	2.64	2.63	2.65	2.68	2.69	2.69	0.38
32. RUBBER & MISC. PLASTICS PROD.	10.24	10.58	11.01	11.36	11.64	11.74	2.77
34. FOOTWEAR & OTHER LEATHER PROD.	2.64	2.64	2.64	2.63	2.60	2.57	-0.50
35. GLASS & GLASS PRODUCTS	3.38	3.48	3.59	3.66	3.68	3.68	1.69
36. STONE & CLAY PRODUCTS	5.68	5.81	5.92	6.08	6.12	6.06	1.29
37. PRIMARY FERROUS METALS	12.03	12.39	12.76	12.91	12.95	12.88	1.38
38. NONFERROUS METALS	6.90	7.16	7.46	7.68	7.81	7.92	2.80
39. METAL CONTAINERS	1.21	1.19	1.19	1.21	1.22	1.23	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	8.76	8.79	9.02	9.34	9.55	9.69	2.03



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
157 SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROO.&STAMPINGS	6 25	6.57	6.78	6 90	6 93	6.96	2.17
42. OTHER FAB METAL PRODUCTS	5 50	5.65	5.89	6 07	6 19	6 32	2.84
43. ENGINES & TURBINES	1 91	1.97	2.04	2 06	2 07	2.08	1.78
44. FARM & GARDEN MACHINERY	2 11	2.15	2.24	2 26	2 26	2.27	1.51
45. CONSTR & MINING MACHINERY	3 60	3.80	4 00	4 14	4 25	4 30	3.64
46. MATERIALS HANDLING MACH. & EQ.	1 29	1 33	1 41	1 46	1 50	1 54	3.62
47. METALWORKING MACH. & EQ.	6 62	6.89	7.30	7 59	7.81	7 96	3.78
48. SPECIAL INDUSTRY MACHINERY	2 76	2 81	2 95	3 09	3 16	3 23	3.22
49. GENERAL INDUSTRY MACHINERY	4 74	4.86	5 09	5.23	5.32	5 40	2.62
50. MISC. NONELECTRICAL MACH.	4 51	4.63	4 82	4 93	4 98	5 04	2.23
51. OFFICE, COMPUTING & ACCT. MACH.	4 34	4 51	4 70	4 79	4 85	4 96	2.73
52. SERVICE INDUSTRY MACHINES	2 55	2 65	2 78	2 83	2 83	2 83	2.10
53. ELECTRICAL MACHINERY	4 11	4 18	4 37	4 46	4 51	4 54	2.03
54. HOUSEHOLD APPLIANCES	2 18	2 24	2 30	2 37	2 43	2 46	2.48
55. ELECTRIC LIGHTING & WIRING EQ.	2 90	2 92	3 00	3 07	3 12	3 16	1.70
56. RADIO, TV, & COMMUNICATION EQ.	8 93	9 13	9 41	9 57	9 66	9 81	1.92
57. ELECTRONIC COMPONENTS & ACCESS.	6 60	6.89	7 23	7 52	7 74	7 90	3 65
58. MISC. ELECTRICAL MACH. & EQ.	2 93	3 04	3 16	3 19	3 23	3 26	2.12
59. MOTOR VEHICLES & EQUIPMENT	24 44	25 55	26 42	26 84	27 14	27 29	2.23
60. AIRCRAFT & PARTS	10 40	10 82	11 11	11 46	11 49	11 48	2.00
61. OTHER TRANSPORTATION EQ.	3 92	4 04	4 18	4 27	4 28	4 31	1.92
62. INSTRUMENTS & SUPPLIES	6 88	7 00	7 28	7 57	7 78	7 91	2 84
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	3 61	3 66	3 81	3 98	4 11	4 22	3 17
64. MISC. MANUFACTURING	5 47	5 55	5 72	5 87	5 96	5 99	1 84
65. TRANSPORTATION & WAREHOUSING	121 38	124 88	127 80	131 50	132 89	133 48	1.92
66. COMMUNICATION EXC. RADIO & TV	14 28	14 42	14 81	15 00	15 38	15 56	1.73
67. RADIO & TV BROADCASTING	3 23	3 33	3 42	3 47	3 50	3 52	1.75
68. UTILITIES	17 18	17 15	17 10	17 05	17 02	16 95	-0.27
69. WHOLESALE & RETAIL TRADE	674 63	694 49	714 33	730 86	743 47	756 65	2.32
70. FINANCE & INSURANCE	79 94	81 73	83 84	86 41	89 13	91 73	2 79
71. REAL ESTATE & RENTAL	123 04	123 45	124 40	125 22	125 48	125 38	0.38
72. PERSONAL SERVICES EXC. AUTO.	1,559 90	1,587 71	1,622 76	1,658 30	1,694 05	1,725 96	2.04
73. BUSINESS SERVICES	703 38	727 81	755 00	786 69	813 86	836 00	3 52
74. EATING & DRINKING PLACES	4,945 95	5,029 19	5,106 47	5,144 45	5,174 19	5,186 43	0.95
75. AUTOMOBILE REPAIR & SERVICE	7 67	7 85	7 95	8 02	8 10	8 19	1 34
76. AMUSEMENTS	355 74	361 30	371 99	381 37	391 41	400 67	2 41
77. MISC. SERVICES	4,556 39	4,651 68	4,759 55	4,901 31	5,060 71	5,235 55	2 82
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	897 75	912 90	930 10	947 27	964 19	980 64	1 78
82. GOVERNMENT INDUSTRY	1,249 43	1,243 83	1,251 49	1,265 71	1,280 35	1,300 88	0 81

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
157. SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
TOTAL, ALL INDUSTRIES	16,726.02	17,008.24	17,328.68	17,648.56	17,963.92	18,270.42	1.78

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
158. FOOD SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INOUCED EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.80
3. FORESTRY & FISHERY PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.14
8. CRUDE PETROLEUM & N. GAS	0.06	0.06	0.06	0.06	0.07	0.07	4.18
11. NEW CONSTRUCTION	0.06	0.06	0.07	0.08	0.08	0.09	8.93
13. DRONANCE & ACCESSORIES	0.12	0.13	0.14	0.16	0.16	0.17	7.45
14. FOOD & KINDRED PRODUCTS	0.02	0.02	0.03	0.03	0.03	0.03	4.14
20. LUMBER & WOOD PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	6.39
26. PRINTING & PUBLISHING	0.01	0.01	0.01	0.01	0.01	0.01	5.95
27. CHEMICALS & PRODUCTS	0.01	0.01	0.02	0.02	0.02	0.02	7.25
37. PRIMARY FERROUS METALS	0.04	0.04	0.04	0.05	0.05	0.05	7.61
38. NONFERROUS METALS	0.01	0.01	0.02	0.02	0.02	0.02	9.61
40. FAB. STRUCTURAL METAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.26
47. METALWORKING MACH. & EQ.	0.01	0.01	0.01	0.01	0.01	0.01	9.35
51. OFFICE, COMPUTING & ACCT. MACH.	0.01	0.01	0.01	0.01	0.01	0.01	7.33
56. RADIO, TV, & COMMUNICATION EQ.	0.21	0.25	0.27	0.29	0.31	0.32	8.05
57. ELECTRONIC COMPONENTS & ACCESS.	0.09	0.11	0.12	0.14	0.15	0.16	11.38
60. AIRCRAFT & PARTS	0.28	0.32	0.35	0.39	0.42	0.43	8.59
61. OTHER TRANSPORTATION EQ.	0.01	0.01	0.01	0.01	0.01	0.01	3.09
62. INSTRUMENTS & SUPPLIES	0.04	0.05	0.05	0.05	0.06	0.06	8.09
65. TRANSPORTATION & WAREHOUSING	0.55	0.57	0.59	0.62	0.64	0.64	3.24
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.02	0.02	0.02	5.49
68. UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	5.92
69. WHOLESALE & RETAIL TRADE	2.21	2.49	2.73	3.01	3.24	3.39	8.91
70. FINANCE & INSURANCE	0.08	0.09	0.10	0.11	0.12	0.12	9.67
71. REAL ESTATE & RENTAL	0.26	0.28	0.31	0.33	0.35	0.36	6.60
72. PERSONAL SERVICES EXC. AUTO.	9.88	11.11	12.09	13.23	14.15	14.87	8.53
73. BUSINESS SERVICES	0.66	0.76	0.84	0.94	1.02	1.07	9.95
74. EATING & DRINKING PLACES	73.28	83.82	93.13	103.19	111.27	116.01	9.62
76. AMUSEMENTS	1.54	1.71	1.86	2.05	2.21	2.34	8.68
77. MISC. SERVICES	7.31	7.50	7.81	8.28	8.67	8.87	3.95
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	3.89	4.34	4.73	5.16	5.47	5.64	7.69
82. GOVERNMENT INDUSTRY	7.23	7.11	7.26	7.49	7.63	7.71	1.29
TOTAL, ALL INDUSTRIES	108.01	121.04	132.81	145.88	156.33	162.66	8.53
TOTAL EMPLOYMENT							
2. OTHER AGRICULTURAL PRODUCTS	5.29	5.31	5.33	5.32	5.31	5.30	0.06

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
158. FOOD SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
3. FORESTRY & FISHERY PRODUCTS	0.23	0.24	0.26	0.27	0.27	0.27	3.17
8. CRUDE PETROLEUM & N. GAS	0.75	0.75	0.75	0.73	0.72	0.73	-0.61
11. NEW CONSTRUCTION	1.52	1.56	1.60	1.65	1.70	1.72	2.49
13. ORDNANCE & ACCESSORIES	0.20	0.20	0.20	0.21	0.21	0.21	1.37
14. FOOD & KINDRED PRODUCTS	3.35	3.36	3.35	3.31	3.25	3.19	-0.93
20. LUMBER & WOOD PRODUCTS	0.33	0.35	0.35	0.36	0.35	0.34	0.71
26. PRINTING & PUBLISHING	0.59	0.59	0.59	0.60	0.60	0.60	0.34
27. CHEMICALS & PRODUCTS	0.27	0.28	0.28	0.28	0.28	0.28	0.76
37. PRIMARY FERROUS METALS	0.52	0.53	0.55	0.56	0.56	0.55	1.25
38. NONFERROUS METALS	0.15	0.16	0.16	0.17	0.17	0.17	3.00
40. FAB. STRUCTURAL METAL PRODUCTS	0.16	0.16	0.17	0.17	0.18	0.18	2.50
47. METALWORKING MACH. & EQ.	0.12	0.12	0.13	0.14	0.14	0.14	3.75
51. OFFICE, COMPUTING & ACCT. MACH.	0.19	0.20	0.21	0.21	0.22	0.22	2.73
56. RADIO, TV, & COMMUNICATION EQ.	0.51	0.52	0.54	0.54	0.55	0.56	1.91
57. ELECTRONIC COMPONENTS & ACCESS.	0.42	0.44	0.46	0.48	0.49	0.51	3.66
60. AIRCRAFT & PARTS	0.57	0.59	0.60	0.62	0.62	0.62	1.99
61. OTHER TRANSPDRATION EQ.	0.04	0.05	0.05	0.05	0.05	0.05	1.68
62. INSTRUMENTS & SUPPLIES	0.35	0.35	0.37	0.38	0.39	0.40	2.63
65. TRANSPORTATION & WAREHOUSING	12.91	13.06	13.18	13.36	13.29	13.14	0.35
66. COMMUNICATION EXC. RADIO & TV	0.54	0.54	0.56	0.56	0.58	0.58	1.78
68. UTILITIES	0.40	0.40	0.40	0.40	0.40	0.40	-0.03
69. WHOLESALE & RETAIL TRADE	361.91	370.99	380.03	387.29	392.46	397.93	1.92
70. FINANCE & INSURANCE	9.12	9.30	9.52	9.79	10.08	10.36	2.57
71. REAL ESTATE & RENTAL	9.44	9.46	9.53	9.59	9.60	9.59	0.33
72. PERSONAL SERVICES EXC. AUTO.	538.66	547.92	559.67	571.59	583.58	594.26	1.98
73. BUSINESS SERVICES	13.70	14.33	15.02	15.79	16.48	17.07	4.49
74. EATING & DRINKING PLACES	4,742.25	4,821.30	4,894.65	4,930.35	4,958.19	4,969.29	0.94
76. AMUSEMENTS	157.94	160.54	165.42	169.72	174.31	178.56	2.49
77. MISC. SERVICES	1,132.58	1,146.20	1,163.03	1,188.14	1,217.43	1,250.30	2.00
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	180.51	183.43	186.44	188.65	190.71	192.40	1.28
82. GOVERNMENT INDUSTRY	74.87	74.49	74.94	75.88	76.83	77.91	0.80
TOTAL, ALL INDUSTRIES	7,255.00	7,372.44	7,493.14	7,582.02	7,664.90	7,732.74	1.28

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
159. SELECTED HEALTH SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INOUCED EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.01	0.01	0.01	0.01	0.01	0.01	6.88
13. ORDNANCE & ACCESSORIES	0.02	0.02	0.02	0.02	0.03	0.03	8.74
27. CHEMICALS & PRODUCTS	0.02	0.02	0.02	0.03	0.03	0.03	7.51
60. AIRCRAFT & PARTS	0.09	0.11	0.12	0.13	0.14	0.14	8.58
61. OTHER TRANSPORTATION EQ.	0.02	0.02	0.02	0.02	0.02	0.02	3.45
65. TRANSPORTATION & WAREHOUSING	0.01	0.01	0.01	0.01	0.01	0.01	5.34
72. PERSONAL SERVICES EXC. AUTO.	0.01	0.01	0.01	0.01	0.02	0.02	8.15
73. BUSINESS SERVICES	0.17	0.20	0.23	0.25	0.28	0.30	11.27
76. AMUSEMENTS	0.01	0.01	0.01	0.02	0.02	0.02	9.20
77. MISC. SERVICES	9.93	10.45	11.13	12.05	12.88	13.45	6.24
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.17	0.18	0.19	0.20	0.21	0.21	4.24
82. GOVERNMENT INDUSTRY	4.86	4.77	4.87	5.01	5.10	5.14	1.14
TOTAL, ALL INDUSTRIES	15.38	15.86	16.70	17.83	18.80	19.44	4.81
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TOTAL EMPLOYMENT							
4. AGR., FORESTRY, & FISHERY SERV.	0.52	0.53	0.54	0.55	0.56	0.57	1.78
13. ORONANCE & ACCESSORIES	0.03	0.03	0.03	0.03	0.03	0.03	2.59
27. CHEMICALS & PRODUCTS	0.42	0.43	0.44	0.44	0.44	0.44	1.00
60. AIRCRAFT & PARTS	0.19	0.19	0.20	0.21	0.21	0.21	1.99
61. OTHER TRANSPORTATION EQ.	0.06	0.06	0.06	0.06	0.06	0.06	2.04
65. TRANSPORTATION & WAREHOUSING	0.19	0.20	0.20	0.21	0.21	0.21	2.39
72. PERSONAL SERVICES EXC. AUTO.	0.58	0.59	0.60	0.61	0.62	0.63	1.63
73. BUSINESS SERVICES	3.57	3.79	4.02	4.28	4.52	4.72	5.74
76. AMUSEMENTS	1.21	1.24	1.28	1.32	1.37	1.41	2.97
77. MISC. SERVICES	1,539.01	1,596.11	1,657.26	1,730.20	1,809.59	1,894.86	4.25
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	8.71	9.00	9.32	9.71	10.13	10.58	3.96
82. GOVERNMENT INDUSTRY	131.90	131.08	131.73	133.25	134.79	136.51	0.69
TOTAL, ALL INDUSTRIES	1,696.71	1,753.61	1,816.10	1,891.32	1,972.98	2,060.69	3.96

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
 OCCUPATION BY INDUSTRY MODEL  
 ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
 160. PROTECTIVE SERVICE WORKERS  
 (THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDOUCED EMPLOYMENT							
6. NONFERROUS METAL MINING	0.03	0.04	0.04	0.04	0.05	0.05	11.02
7. COAL MINING	0.04	0.04	0.05	0.05	0.06	0.06	9.22
8. CRUDE PETROLEUM & N. GAS	0.02	0.02	0.02	0.02	0.02	0.02	4.45
9. STONE&CLAY MINING & QUARRYING	0.01	0.02	0.02	0.02	0.02	0.02	10.27
11. NEW CONSTRUCTION	0.10	0.11	0.12	0.13	0.14	0.15	8.58
13. ORONANCE & ACCESSORIES	1.98	2.22	2.40	2.58	2.70	2.79	7.13
14. FOOD & KINORED PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.03	5.35
16. FABRIC, YARN & THREAD MILLS	0.02	0.02	0.03	0.03	0.03	0.03	4.63
17. MISC. TEXTILE GOODS	0.01	0.01	0.01	0.01	0.01	0.01	7.17
18. APPAREL	0.01	0.01	0.01	0.01	0.01	0.01	5.99
19. MISC. FABRICATED TEXTILE PROO.	0.01	0.01	0.01	0.01	0.01	0.01	4.65
20. LUMBER & WOOD PRODUCTS	0.05	0.06	0.07	0.07	0.08	0.08	9.05
21. WOOD CONTAINERS	0.01	0.01	0.01	0.01	0.02	0.02	9.80
22. HOUSEHOLD FURNITURE	0.01	0.01	0.01	0.01	0.01	0.01	3.70
23. OTHER FURNITURE & FIXTURES	0.01	0.01	0.01	0.01	0.01	0.01	4.39
24. PAPER & ALLIED PRODUCTS	0.03	0.04	0.04	0.04	0.04	0.05	6.62
25. PAPERBOARD CONTAINERS & BOXES	0.01	0.01	0.01	0.01	0.01	0.01	8.80
26. PRINTING & PUBLISHING	0.02	0.03	0.03	0.03	0.03	0.03	6.25
27. CHEMICALS & PRODUCTS	0.15	0.17	0.18	0.19	0.21	0.22	7.83
28. PLASTICS & SYNTHETIC MATLS.	0.02	0.02	0.02	0.02	0.02	0.02	8.70
29. DRUGS, CLEANING & TOILET PREP.	0.01	0.01	0.01	0.01	0.01	0.01	4.24
30. PAINTS & ALLIED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	8.16
31. PET REFINING & REL. PROO.	0.06	0.06	0.07	0.07	0.07	0.08	5.25
32. RUBBER & MISC. PLASTICS PROO.	0.04	0.04	0.05	0.05	0.06	0.06	10.08
35. GLASS & GLASS PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.02	8.40
36. STONE & CLAY PRODUCTS	0.02	0.03	0.03	0.03	0.04	0.04	8.59
37. PRIMARY FERROUS METALS	0.26	0.29	0.31	0.34	0.36	0.37	7.51
38. NONFERROUS METALS	0.15	0.18	0.19	0.21	0.23	0.24	9.70
40. FAB. STRUCTURAL METAL PRODUCTS	0.07	0.07	0.08	0.08	0.09	0.09	7.81
41. SCREW MACHINE PROO. & STAMPINGS	0.06	0.06	0.07	0.07	0.08	0.08	7.68
42. OTHER FAB. METAL PRODUCTS	0.03	0.03	0.03	0.04	0.04	0.04	9.73
43. ENGINES & TURBINES	0.04	0.05	0.05	0.05	0.06	0.06	7.71
45. CONSTR. & MINING MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.24
46. MATERIALS HANDLING MACH. & EQ.	0.02	0.02	0.02	0.02	0.03	0.03	9.12
47. METALWORKING MACH. & EQ.	0.02	0.03	0.03	0.03	0.04	0.04	9.36
49. GENERAL INDUSTRY MACHINERY	0.03	0.03	0.03	0.04	0.04	0.04	7.52
50. MISC. NONELECTRICAL MACH.	0.02	0.02	0.02	0.02	0.03	0.03	7.55

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
160. PROTECTIVE SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
51. OFFICE, COMPUTING & ACCT. MACH.	0.04	0.04	0.04	0.05	0.05	0.05	7.32
53. ELECTRICAL MACHINERY	0.03	0.03	0.03	0.04	0.04	0.04	9.14
55. ELECTRIC LIGHTING & WIRING EQ.	0.03	0.03	0.03	0.03	0.04	0.04	8.26
56. RADIO, TV, & COMMUNICATION EQ.	1.16	1.33	1.47	1.59	1.68	1.72	8.15
57. ELECTRONIC COMPONENTS & ACCESS.	0.24	0.29	0.33	0.37	0.40	0.42	11.37
58. MISC. ELECTRICAL MACH. & EQ.	0.02	0.02	0.02	0.02	0.02	0.02	9.58
59. MOTOR VEHICLES & EQUIPMENT	0.09	0.11	0.12	0.15	0.17	0.20	17.14
60. AIRCRAFT & PARTS	1.67	1.89	2.08	2.29	2.45	2.52	8.59
61. OTHER TRANSPORTATION EQ.	0.38	0.40	0.42	0.42	0.44	0.45	3.35
62. INSTRUMENTS & SUPPLIES	0.09	0.10	0.11	0.12	0.12	0.13	8.18
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.02	0.02	0.03	0.03	0.03	0.03	8.52
64. MISC. MANUFACTURING	0.01	0.01	0.01	0.01	0.01	0.01	6.11
65. TRANSPORTATION & WAREHOUSING	0.39	0.42	0.43	0.46	0.48	0.48	4.15
66. COMMUNICATION EXC. RADIO & TV	0.01	0.01	0.01	0.01	0.01	0.01	6.86
68. UTILITIES	0.05	0.06	0.06	0.06	0.07	0.07	6.35
69. WHOLESALE & RETAIL TRADE	0.31	0.36	0.40	0.45	0.50	0.54	11.80
70. FINANCE & INSURANCE	0.15	0.17	0.19	0.22	0.24	0.26	11.44
71. REAL ESTATE & RENTAL	0.54	0.61	0.66	0.73	0.78	0.81	8.33
72. PERSONAL SERVICES EXC. AUTO.	0.39	0.43	0.47	0.51	0.55	0.57	8.22
73. BUSINESS SERVICES	13.54	15.11	16.47	18.06	19.26	19.91	8.02
74. EATING & DRINKING PLACES	0.30	0.35	0.39	0.43	0.47	0.49	9.76
76. AMUSEMENTS	0.26	0.29	0.32	0.35	0.38	0.41	9.17
77. MISC. SERVICES	0.57	0.59	0.61	0.65	0.68	0.69	4.06
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	0.11	0.11	0.12	0.12	0.13	0.13	2.49
82. GOVERNMENT INDUSTRY	19.97	19.78	20.36	21.13	21.68	22.02	1.98
TOTAL, ALL INDUSTRIES	43.79	46.38	49.33	52.79	55.41	56.95	5.39
TOTAL EMPLOYMENT							
6. NONFERROUS METAL MINING	0.51	0.54	0.56	0.58	0.57	0.58	2.44
7. COAL MINING	1.36	1.43	1.49	1.53	1.58	1.62	3.51
8. CRUDE PETROLEUM & N. GAS	0.24	0.24	0.24	0.23	0.23	0.23	-0.35
9. STONE & CLAY MINING & QUARRYING	0.45	0.46	0.47	0.50	0.51	0.51	2.85
11. NEW CONSTRUCTION	2.65	2.71	2.76	2.84	2.91	2.95	2.15
13. ORDNANCE & ACCESSORIES	3.27	3.32	3.36	3.41	3.43	3.45	1.07
14. FOOD & KINDRED PRODUCTS	2.91	2.96	2.98	2.98	2.96	2.94	0.22
16. FABRIC, YARN & THREAD MILLS	1.80	1.85	1.89	1.91	1.92	1.92	1.25
17. MISC. TEXTILE GOODS	0.55	0.58	0.60	0.62	0.63	0.64	2.77
18. APPAREL	1.87	1.89	1.93	1.96	1.96	1.96	0.96

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
160. PROTECTIVE SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
19. MISC. FABRICATED TEXTILE PROD.	0.32	0.33	0.34	0.35	0.35	0.35	1.83
20. LUMBER & WOOD PRODUCTS	2.64	2.86	2.98	3.09	3.13	3.10	3.23
21. WOOD CONTAINERS	0.17	0.17	0.18	0.18	0.18	0.18	1.15
22. HOUSEHOLD FURNITURE	0.95	1.00	1.03	1.07	1.09	1.10	3.03
23. OTHER FURNITURE & FIXTURES	0.39	0.39	0.40	0.41	0.42	0.43	1.98
24. PAPER & ALLIED PRODUCTS	1.76	1.81	1.83	1.83	1.83	1.83	0.79
25. PAPERBOARD CONTAINERS & BOXES	0.36	0.37	0.38	0.39	0.39	0.39	1.73
26. PRINTING & PUBLISHING	1.48	1.48	1.50	1.51	1.52	1.52	0.62
27. CHEMICALS & PRODUCTS	3.12	3.18	3.24	3.28	3.30	3.32	1.30
28. PLASTICS & SYNTHETIC MATLS.	0.65	0.67	0.69	0.71	0.72	0.72	2.30
29. DRUGS, CLEANING & TOILET PREP.	1.65	1.67	1.69	1.72	1.72	1.73	0.84
30. PAINTS & ALLIED PRODUCTS	0.13	0.14	0.14	0.15	0.15	0.15	2.94
31. PET REFINING & REL. PROD.	1.09	1.09	1.10	1.11	1.11	1.11	0.31
32. RUBBER & MISC. PLASTICS PROD.	1.44	1.49	1.54	1.59	1.63	1.64	2.66
35. GLASS & GLASS PRODUCTS	0.46	0.47	0.47	0.47	0.46	0.46	-0.23
36. STONE & CLAY PRODUCTS	0.76	0.78	0.80	0.82	0.83	0.82	1.34
37. PRIMARY FERROUS METALS	3.65	3.75	3.85	3.89	3.89	3.86	1.16
38. NONFERROUS METALS	1.81	1.88	1.97	2.03	2.07	2.11	3.08
40. FAB. STRUCTURAL METAL PRODUCTS	1.46	1.46	1.50	1.56	1.59	1.62	2.07
41. SCREW MACHINE PROD. & STAMPINGS	0.90	0.94	0.97	0.99	0.99	1.00	2.15
42. OTHER FAB. METAL PRODUCTS	0.58	0.60	0.63	0.65	0.66	0.68	3.03
43. ENGINES & TURBINES	0.50	0.52	0.54	0.54	0.54	0.55	1.77
45. CONSTR. & MINING MACHINERY	0.84	0.88	0.93	0.96	0.99	1.00	3.64
46. MATERIALS HANDLING MACH. & EQ.	0.30	0.31	0.33	0.34	0.35	0.36	3.62
47. METALWORKING MACH. & EQ.	0.47	0.49	0.52	0.54	0.56	0.57	3.76
49. GENERAL INDUSTRY MACHINERY	0.65	0.67	0.70	0.72	0.73	0.74	2.63
50. MISC. NONELECTRICAL MACH.	0.16	0.17	0.18	0.18	0.18	0.18	2.24
51. OFFICE, COMPUTING & ACCT. MACH.	0.94	0.97	1.02	1.03	1.05	1.07	2.72
53. ELECTRICAL MACHINERY	0.52	0.53	0.55	0.56	0.57	0.57	2.09
55. ELECTRIC LIGHTING & WIRING EQ.	0.53	0.53	0.55	0.56	0.57	0.58	1.71
56. RADIO, TV, & COMMUNICATION EQ.	2.75	2.81	2.90	2.95	2.98	3.03	2.00
57. ELECTRONIC COMPONENTS & ACCESS.	1.12	1.17	1.22	1.27	1.31	1.34	3.65
58. MISC. ELECTRICAL MACH. & EQ.	0.56	0.58	0.60	0.61	0.62	0.62	2.13
59. MOTOR VEHICLES & EQUIPMENT	4.72	4.94	5.11	5.19	5.24	5.27	2.23
60. AIRCRAFT & PARTS	3.34	3.47	3.57	3.68	3.69	3.69	2.00
61. OTHER TRANSPORTATION EQ.	1.32	1.36	1.40	1.43	1.44	1.45	1.93
62. INSTRUMENTS & SUPPLIES	0.74	0.75	0.78	0.81	0.83	0.85	2.72
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.50	0.51	0.53	0.55	0.57	0.59	3.16
64. MISC. MANUFACTURING	0.73	0.74	0.77	0.79	0.80	0.81	2.07



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
160. PROTECTIVE SERVICE WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
65. TRANSPORTATION & WAREHOUSING	9.28	9.46	9.64	9.85	9.89	9.86	1.24
68. COMMUNICATION EXC. RADIO & TV	0.30	0.31	0.32	0.33	0.34	0.35	3.10
68. UTILITIES	2.34	2.35	2.36	2.37	2.38	2.39	0.38
69. WHOLESALE & RETAIL TRADE	50.14	52.91	55.71	58.28	60.54	62.85	4.62
70. FINANCE & INSURANCE	17.45	18.13	18.87	19.72	20.60	21.46	4.22
71. REAL ESTATE & RENTAL	19.77	20.18	20.67	21.14	21.50	21.79	1.96
72. PERSONAL SERVICES EXC. AUTO.	21.08	21.38	21.77	22.17	22.58	22.93	1.69
73. BUSINESS SERVICES	279.06	286.10	294.21	304.01	312.03	318.11	2.65
74. EATING & DRINKING PLACES	19.73	20.09	20.42	20.60	20.74	20.81	1.06
76. AMUSEMENTS	26.77	27.34	28.30	29.17	30.08	30.94	2.94
77. MISC. SERVICES	88.18	89.35	90.76	92.83	95.22	97.89	2.11
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	1.21	1.22	1.24	1.27	1.29	1.31	1.68
82. GOVERNMENT INDUSTRY	786.81	784.68	790.76	800.70	810.90	825.47	0.96
TOTAL, ALL INDUSTRIES	1,389.59	1,402.89	1,426.31	1,455.10	1,481.47	1,509.96	1.68

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
161. SERVICE WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.62
2. OTHER AGRICULTURAL PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	2.77
4. AGR., FORESTRY, & FISHERY SERV.	0.02	0.02	0.03	0.03	0.03	0.03	6.86
5. IRON ORE MINING	0.02	0.02	0.02	0.03	0.03	0.03	8.07
6. NONFERROUS METAL MINING	0.03	0.04	0.04	0.05	0.05	0.06	11.05
7. COAL MINING	0.02	0.03	0.03	0.03	0.03	0.04	9.12
8. CRUDE PETROLEUM & N. GAS	0.18	0.19	0.19	0.20	0.21	0.21	3.74
9. STONE & CLAY MINING & QUARRYING	0.02	0.03	0.03	0.03	0.04	0.04	9.92
11. NEW CONSTRUCTION	1.18	1.34	1.45	1.60	1.73	1.82	8.95
13. ORNANCE & ACCESSORIES	2.44	2.76	3.01	3.25	3.43	3.56	7.84
14. FOOD & KINDRED PRODUCTS	0.40	0.43	0.45	0.48	0.50	0.51	5.17
16. FABRIC, YARN & THREAD MILLS	0.08	0.09	0.09	0.09	0.10	0.10	4.85
17. MISC. TEXTILE GOODS	0.02	0.03	0.03	0.03	0.03	0.03	7.16
18. APPAREL	0.05	0.06	0.06	0.06	0.07	0.07	6.05
19. MISC. FABRICATED TEXTILE PROD.	0.06	0.07	0.07	0.08	0.08	0.08	4.69
20. LUMBER & WOOD PRODUCTS	0.14	0.16	0.17	0.19	0.21	0.22	9.12
21. WOOD CONTAINERS	0.02	0.02	0.02	0.02	0.03	0.03	9.78
22. HOUSEHOLD FURNITURE	0.02	0.02	0.03	0.03	0.03	0.03	3.70
23. OTHER FURNITURE & FIXTURES	0.04	0.04	0.04	0.04	0.04	0.05	4.71
24. PAPER & ALLIED PRODUCTS	0.12	0.14	0.15	0.16	0.17	0.17	6.84
25. PAPERBOARD CONTAINERS & BOXES	0.04	0.05	0.05	0.06	0.06	0.06	7.74
26. PRINTING & PUBLISHING	0.30	0.32	0.35	0.37	0.39	0.40	5.95
27. CHEMICALS & PRODUCTS	0.30	0.33	0.35	0.38	0.41	0.43	7.46
28. PLASTICS & SYNTHETIC MATLS.	0.06	0.07	0.07	0.08	0.08	0.09	8.71
29. DRUGS, CLEANING & TOILET PREP.	0.03	0.03	0.03	0.03	0.03	0.03	3.46
30. PAINTS & ALLIED PRODUCTS	0.04	0.05	0.05	0.06	0.06	0.06	8.20
31. PET REFINING & REL. PROD.	0.08	0.08	0.09	0.10	0.10	0.10	5.36
32. RUBBER & MISC. PLASTICS PROD.	0.24	0.27	0.30	0.33	0.36	0.38	10.21
34. FOOTWEAR & OTHER LEATHER PROD.	0.01	0.01	0.01	0.01	0.01	0.01	5.30
35. GLASS & GLASS PRODUCTS	0.06	0.07	0.08	0.08	0.09	0.10	10.63
36. STONE & CLAY PRODUCTS	0.16	0.18	0.19	0.21	0.22	0.23	8.53
37. PRIMARY FERROUS METALS	0.55	0.62	0.67	0.73	0.78	0.81	7.86
38. NONFERROUS METALS	0.42	0.48	0.53	0.58	0.62	0.65	9.28
39. METAL CONTAINERS	0.02	0.02	0.02	0.02	0.02	0.02	6.60
40. FAB. STRUCTURAL METAL PRODUCTS	0.31	0.35	0.38	0.41	0.43	0.45	7.74
41. SCREW MACHINE PROD. & STAMPINGS	0.32	0.36	0.39	0.42	0.45	0.47	7.70
42. OTHER FAB. METAL PRODUCTS	0.22	0.25	0.28	0.31	0.33	0.35	9.50

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
161. SERVICE WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
43. ENGINES & TURBINES	0.11	0.13	0.14	0.15	0.16	0.16	7.72
44. FARM & GARDEN MACHINERY	0.01	0.01	0.01	0.01	0.01	0.01	7.01
45. CONSTR. & MINING MACHINERY	0.03	0.04	0.04	0.04	0.04	0.05	7.25
46. MATERIALS HANDLING MACH. & EQ.	0.06	0.06	0.07	0.08	0.08	0.09	9.12
47. METALWORKING MACH. & EQ.	0.31	0.36	0.39	0.43	0.46	0.48	9.36
48. SPECIAL INDUSTRY MACHINERY	0.02	0.02	0.02	0.03	0.03	0.03	12.06
49. GENERAL INDUSTRY MACHINERY	0.18	0.20	0.21	0.23	0.24	0.25	7.51
50. MISC. NONELECTRICAL MACH.	0.50	0.54	0.59	0.65	0.69	0.72	7.53
51. OFFICE COMPUTING & ACCT. MACH.	0.12	0.14	0.15	0.16	0.17	0.17	7.32
52. SERVICE INDUSTRY MACHINES	0.04	0.05	0.05	0.06	0.07	0.08	13.37
53. ELECTRICAL MACHINERY	0.17	0.20	0.22	0.24	0.26	0.27	9.06
55. ELECTRIC LIGHTING & WIRING EQ.	0.11	0.13	0.14	0.15	0.16	0.17	8.25
56. RADIO, TV, & COMMUNICATION EQ.	2.40	2.75	3.02	3.28	3.45	3.52	8.02
57. ELECTRONIC COMPONENTS & ACCESS.	1.11	1.32	1.49	1.66	1.81	1.90	11.36
58. MISC. ELECTRICAL MACH. & EQ.	0.06	0.07	0.08	0.09	0.10	0.10	9.57
59. MOTOR VEHICLES & EQUIPMENT	0.38	0.45	0.51	0.61	0.72	0.84	17.14
60. AIRCRAFT & PARTS	3.15	3.56	3.93	4.33	4.63	4.76	8.59
61. OTHER TRANSPORTATION EQ.	0.73	0.76	0.79	0.80	0.83	0.85	3.32
62. INSTRUMENTS & SUPPLIES	0.67	0.76	0.83	0.91	0.97	1.01	8.34
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.13	0.14	0.16	0.17	0.19	0.20	8.53
64. MISC. MANUFACTURING	0.05	0.05	0.06	0.06	0.07	0.07	5.86
65. TRANSPORTATION & WAREHOUSING	4.21	4.48	4.71	5.03	5.27	5.40	5.11
66. COMMUNICATION EXC. RADIO & TV	0.33	0.35	0.37	0.40	0.43	0.43	5.41
67. RADIO & TV BROADCASTING	0.06	0.07	0.07	0.08	0.08	0.09	8.19
68. UTILITIES	0.31	0.34	0.36	0.38	0.40	0.41	5.53
69. WHOLESALE & RETAIL TRADE	1.60	1.81	2.00	2.21	2.39	2.52	9.44
70. FINANCE & INSURANCE	0.46	0.52	0.57	0.63	0.68	0.72	9.43
71. REAL ESTATE & RENTAL	2.58	2.82	3.02	3.25	3.42	3.50	6.29
72. PERSONAL SERVICES EXC. AUTO.	18.33	20.65	22.48	24.63	26.36	27.73	8.63
73. BUSINESS SERVICES	19.75	22.37	24.73	27.49	29.67	31.05	9.47
74. EATING & DRINKING PLACES	2.84	3.26	3.64	4.05	4.38	4.58	10.03
75. AUTOMOBILE REPAIR & SERVICE	0.11	0.12	0.13	0.14	0.15	0.15	7.58
76. AMUSEMENTS	1.66	1.83	1.99	2.18	2.35	2.49	8.43
77. MISC. SERVICES	11.60	11.92	12.41	13.17	13.80	14.14	4.04
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	15.66	16.81	17.92	19.19	20.07	20.61	5.64
82. GOVERNMENT INDUSTRY	5.99	5.88	6.01	6.19	6.30	6.35	1.19
TOTAL, ALL INDUSTRIES	103.89	113.99	123.07	133.78	142.18	147.65	7.28

TOTAL EMPLOYMENT

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
161. SERVICE WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
1. LIVESTOCK & PRODUCTS	1.15	1.16	1.14	1.12	1.11	1.10	-0.79
2. OTHER AGRICULTURAL PRODUCTS	8.32	8.35	8.39	8.36	8.34	8.33	0.03
4. AGR., FORESTRY, & FISHERY SERV.	1.24	1.28	1.29	1.32	1.34	1.36	1.76
5. IRON ORE MINING	0.38	0.40	0.43	0.43	0.42	0.41	1.90
6. NONFERROUS METAL MINING	0.58	0.61	0.63	0.65	0.65	0.65	2.47
7. COAL MINING	0.82	0.86	0.89	0.92	0.95	0.97	3.42
8. CRUDE PETROLEUM & N. GAS	2.42	2.41	2.39	2.34	2.29	2.30	-1.02
9. STONE & CLAY MINING & QUARRYING	0.74	0.75	0.78	0.81	0.83	0.84	2.52
11. NEW CONSTRUCTION	31.46	32.22	32.97	34.11	35.03	35.61	2.51
13. ORNANCE & ACCESSORIES	4.04	4.13	4.20	4.30	4.36	4.40	1.74
14. FOOD & KINDRED PRODUCTS	59.48	60.35	60.77	60.61	60.07	59.64	0.05
16. FABRIC, YARN & THREAD MILLS	6.40	6.57	6.73	6.85	6.89	6.88	1.47
17. MISC. TEXTILE GOODS	1.62	1.68	1.75	1.81	1.84	1.85	2.76
18. APPAREL	14.61	14.73	15.06	15.34	15.36	15.36	1.01
19. MISC. FABRICATED TEXTILE PROD.	2.20	2.25	2.31	2.36	2.39	2.41	1.87
20. LUMBER & WOOD PRODUCTS	6.87	7.45	7.74	8.05	8.14	8.08	3.30
21. WOOD CONTAINERS	0.28	0.28	0.29	0.30	0.30	0.30	1.12
22. HOUSEHOLD FURNITURE	3.97	4.18	4.32	4.47	4.56	4.61	3.03
23. OTHER FURNITURE & FIXTURES	2.27	2.29	2.36	2.43	2.48	2.54	2.28
24. PAPER & ALLIED PRODUCTS	6.71	6.92	7.01	7.04	7.05	7.05	0.99
25. PAPERBOARD CONTAINERS & BOXES	1.97	2.01	2.03	2.05	2.05	2.05	0.74
26. PRINTING & PUBLISHING	19.05	19.09	19.20	19.31	19.35	19.38	0.34
27. CHEMICALS & PRODUCTS	6.20	6.30	6.39	6.44	6.47	6.50	0.96
28. PLASTICS & SYNTHETIC MATLS.	2.42	2.51	2.60	2.66	2.70	2.71	2.31
29. DRUGS, CLEANING & TOILET PREP.	7.17	7.16	7.22	7.26	7.22	7.19	0.08
30. PAINTS & ALLIED PRODUCTS	0.81	0.85	0.88	0.91	0.93	0.94	2.97
31. PET REFINING & REL. PROD.	1.48	1.48	1.49	1.50	1.51	1.51	0.42
32. RUBBER & MISC. PLASTICS PROD.	8.67	8.96	9.33	9.62	9.86	9.95	2.79
34. FOOTWEAR & OTHER LEATHER PROD.	1.98	1.98	1.99	1.99	1.97	1.96	-0.20
35. GLASS & GLASS PRODUCTS	2.71	2.80	2.88	2.94	2.96	2.97	1.82
36. STONE & CLAY PRODUCTS	4.82	4.93	5.02	5.15	5.19	5.14	1.28
37. PRIMARY FERROUS METALS	7.79	8.03	8.28	8.38	8.42	8.38	1.49
38. NONFERROUS METALS	4.94	5.12	5.32	5.48	5.56	5.64	2.69
39. METAL CONTAINERS	1.12	1.11	1.11	1.13	1.14	1.14	0.35
40. FAB. STRUCTURAL METAL PRODUCTS	7.02	7.05	7.23	7.48	7.64	7.75	2.00
41. SCREW MACHINE PROD. & STAMPINGS	5.24	5.51	5.69	5.79	5.82	5.84	2.17
42. OTHER FAB. METAL PRODUCTS	4.83	4.97	5.18	5.33	5.44	5.55	2.81
43. ENGINES & TURBINES	1.34	1.39	1.44	1.45	1.46	1.47	1.78

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
161. SERVICE WORKERS, NEC  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
44. FARM & GARDEN MACHINERY	1 56	1 58	1 64	1 65	1 65	1 66	1.23
45. CONSTR. & MINING MACHINERY	2 71	2 87	3 02	3 13	3 21	3 24	3.64
46. MATERIALS HANDLING MACH. & EQ.	0 97	1 00	1 06	1 11	1 14	1 16	3.62
47. METALWORKING MACH. & EQ.	6 02	6 26	6 63	6 90	7 10	7 23	3.76
48. SPECIAL INDUSTRY MACHINERY	2 47	2 52	2 65	2 76	2 83	2 89	
49. GENERAL INDUSTRY MACHINERY	4 01	4 11	4 30	4 42	4 49	4 56	
50. MISC. NONELECTRICAL MACH.	4 34	4 46	4 65	4 75	4 79	4 85	
51. OFFICE, COMPUTING & ACCT. MACH.	3 21	3 34	3 48	3 54	3 59	3 67	2.73
52. SERVICE INDUSTRY MACHINES	2 32	2 41	2 53	2 57	2 57	2 57	2.10
53. ELECTRICAL MACHINERY	3 50	3 56	3 72	3 80	3 84	3 87	2.01
55. ELECTRIC LIGHTING & WIRING EQ.	2 36	2 38	2 44	2 50	2 54	2 57	1.70
56. RADIO, TV, & COMMUNICATION EQ.	5 67	5 80	5 98	6 08	6 13	6 23	1.88
57. ELECTRONIC COMPONENTS & ACCESS.	5 06	5 28	5 54	5 77	5 93	6 06	3.64
58. MISC. ELECTRICAL MACH. & EQ.	2 33	2 42	2 51	2 54	2 57	2 59	2.12
59. MOTOR VEHICLES & EQUIPMENT	19 62	20 51	21 20	21 54	21 78	21 90	2.23
60. AIRCRAFT & PARTS	6 31	6 56	6 74	6 95	6 97	6 96	2.00
61. OTHER TRANSPORTATION EQ.	2 50	2 58	2 67	2 72	2 73	2 75	1.91
62. INSTRUMENTS & SUPPLIES	5 79	5 89	6 13	6 38	6 55	6 67	2.87
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	3 03	3 07	3 21	3 35	3 46	3 54	3.17
64. MISC. MANUFACTURING	4 54	4 60	4 74	4 87	4 94	4 97	1.83
65. TRANSPORTATION & WAREHOUSING	99 00	101 96	104 78	108 09	109 50	110 24	2.17
66. COMMUNICATION EXC. RADIO & TV	13 44	13 57	13 93	14 10	14 46	14 62	1.70
67. RADIO & TV BROADCASTING	2 98	3 08	3 16	3 20	3 23	3 26	1.75
68. UTILITIES	14 40	14 35	14 30	14 23	14 19	14 12	-0.39
69. WHOLESALE & RETAIL TRADE	262 07	270 05	278 02	284 71	289 87	295 26	2.41
70. FINANCE & INSURANCE	53 36	54 29	55 44	56 90	58 44	59 91	2.34
71. REAL ESTATE & RENTAL	93 83	93 80	94 20	94 49	94 38	94 00	0.04
72. PERSONAL SERVICES EXC. AUTD.	999 58	1,017 83	1,040 72	1,063 92	1,087 27	1,108 15	2.08
73. BUSINESS SERVICES	407 04	423 58	441 76	462 61	480 84	496 10	4.04
74. EATING & DRINKING PLACES	183 87	187 71	191 30	193 40	195 16	196 24	1.31
75. AUTOMOBILE REPAIR & SERVICE	7 26	7 43	7 52	7 58	7 64	7 73	1.25
76. AMUSEMENTS	169 82	172 18	176 98	181 16	185 65	189 76	2.24
77. MISC. SERVICES	1,796 61	1,820 02	1,848 50	1,890 15	1,938 47	1,992 50	2.09
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	699 30	709 44	721 72	735 52	749 03	762 31	1.74
82. GOVERNMENT INDUSTRY	255 21	252 63	252 77	254 24	255 81	258 62	0.27
TOTAL, ALL INDUSTRIES	6,376 06	6,468 55	6,580 47	6,706 35	6,829 51	6,950 61	1.74

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
 OCCUPATION BY INDUSTRY MODEL  
 ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
 162. LABORS, EXCEPT FARM  
 (THOUSANDS OF PERSONS.)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
DEFENSE INDUCED EMPLOYMENT							
3. FORESTRY & FISHERY PRODUCTS	0.52	0.56	0.60	0.64	0.67	0.69	5.87
4. AGR., FORESTRY, & FISHERY SERV.	1.85	1.79	1.90	2.06	2.20	2.30	6.87
5. IRON ORE MINING	0.28	0.32	0.35	0.38	0.40	0.41	7.93
6. NONFERROUS METAL MINING	0.51	0.59	0.66	0.74	0.80	0.86	11.11
7. COAL MINING	0.81	0.92	1.01	1.09	1.19	1.24	8.92
8. CRUDE PETROLEUM & N. GAS	0.69	0.73	0.75	0.78	0.81	0.81	3.32
9. STONE & CLAY MINING & QUARRYING	0.32	0.36	0.39	0.44	0.48	0.51	9.92
10. CHEM. FERTILIZER MIN. MINING	0.04	0.05	0.05	0.06	0.06	0.06	7.91
11. NEW CONSTRUCTION	28.40	32.16	34.64	38.32	41.29	43.39	8.85
13. ORNANCE & ACCESSORIES	5.40	6.08	6.60	7.11	7.47	7.72	7.38
14. FOOD & KINDRED PRODUCTS	1.37	1.49	1.58	1.68	1.75	1.80	5.63
15. TOBACCO MANUFACTURES	0.02	0.02	0.02	0.02	0.03	0.03	7.10
16. FABRIC, YARN & THREAD MILLS	0.48	0.51	0.53	0.56	0.58	0.59	3.99
17. MISC. TEXTILE GOODS	0.14	0.16	0.17	0.18	0.19	0.20	7.10
18. APPAREL	0.17	0.18	0.18	0.20	0.21	0.22	5.95
19. MISC. FABRICATED TEXTILE PROD.	0.45	0.48	0.50	0.53	0.54	0.56	4.52
20. LUMBER & WOOD PRODUCTS	2.48	2.79	2.99	3.24	3.50	3.68	8.19
21. WOOD CONTAINERS	0.44	0.51	0.56	0.61	0.66	0.70	9.82
22. HOUSEHOLD FURNITURE	0.18	0.19	0.20	0.21	0.21	0.21	3.51
23. OTHER FURNITURE & FIXTURES	0.24	0.25	0.26	0.27	0.29	0.30	4.45
24. PAPER & ALLIED PRODUCTS	1.04	1.14	1.23	1.32	1.39	1.43	6.47
25. PAPERBOARD CONTAINERS & BOXES	0.53	0.60	0.65	0.72	0.77	0.81	8.61
26. PRINTING & PUBLISHING	0.68	0.73	0.77	0.82	0.86	0.87	5.14
27. CHEMICALS & PRODUCTS	1.18	1.28	1.36	1.46	1.54	1.60	6.27
28. PLASTICS & SYNTHETIC MATLS.	0.18	0.20	0.22	0.24	0.25	0.25	6.76
29. DRUGS, CLEANING & TOILET PREP.	0.07	0.07	0.07	0.07	0.08	0.08	2.52
30. PAINTS & ALLIED PRODUCTS	0.22	0.24	0.26	0.28	0.30	0.31	7.28
31. PET REFINING & REL. PROD.	0.67	0.70	0.74	0.78	0.82	0.83	4.50
32. RUBBER & MISC. PLASTICS PROD.	1.60	1.80	1.99	2.22	2.42	2.55	9.73
33. LEATHER TANNING & FINISHING	0.02	0.02	0.02	0.02	0.02	0.02	5.40
34. FOOTWEAR & OTHER LEATHER PROD.	0.04	0.04	0.04	0.05	0.05	0.05	4.95
35. GLASS & GLASS PRODUCTS	0.40	0.45	0.50	0.55	0.59	0.63	9.37
36. STONE & CLAY PRODUCTS	1.75	1.98	2.12	2.32	2.48	2.59	8.14
37. PRIMARY FERROUS METALS	6.90	7.67	8.29	9.04	9.63	10.04	7.80
38. NONFERROUS METALS	3.65	4.16	4.56	5.00	5.36	5.58	8.87
39. METAL CONTAINERS	0.16	0.17	0.18	0.19	0.21	0.22	6.61
40. FAB. STRUCTURAL METAL PRODUCTS	2.16	2.41	2.56	2.73	2.87	3.00	6.75

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
162. LABORS, EXCEPT FARM  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
41. SCREW MACHINE PROD.&STAMPINGS	1.46	1.63	1.76	1.92	2.04	2.12	7.77
42. OTHER FAB. METAL PRODUCTS	1.47	1.67	1.81	1.98	2.13	2.23	8.64
43. ENGINES & TURBINES	0.35	0.39	0.41	0.43	0.45	0.46	5.62
44. FARM & GARDEN MACHINERY	0.02	0.02	0.02	0.02	0.03	0.03	8.11
45. CONSTR. & MINING MACHINERY	0.13	0.14	0.15	0.16	0.17	0.17	5.36
46. MATERIALS HANDLING MACH. & EQ.	0.23	0.26	0.27	0.30	0.31	0.32	7.20
47. METALWORKING MACH. & EQ.	0.42	0.47	0.51	0.55	0.58	0.60	7.45
48. SPECIAL INDUSTRY MACHINERY	0.05	0.05	0.06	0.07	0.07	0.08	10.18
49. GENERAL INDUSTRY MACHINERY	0.42	0.45	0.48	0.50	0.52	0.53	5.08
50. MISC. NONELECTRICAL MACH.	0.45	0.48	0.52	0.56	0.58	0.59	5.79
51. OFFICE, COMPUTING & ACCT. MACH.	0.24	0.27	0.28	0.29	0.29	0.29	3.59
52. SERVICE INDUSTRY MACHINES	0.19	0.22	0.24	0.27	0.31	0.34	11.90
53. ELECTRICAL MACHINERY	0.64	0.72	0.77	0.83	0.88	0.90	6.92
54. HOUSEHOLD APPLIANCES	0.03	0.03	0.03	0.03	0.04	0.04	9.06
55. ELECTRIC LIGHTING & WIRING EQ.	0.72	0.80	0.86	0.94	1.00	1.04	7.78
56. RADIO, TV, & COMMUNICATION EQ.	8.83	9.92	10.65	11.29	11.62	11.61	5.63
57. ELECTRONIC COMPONENTS & ACCESS.	2.61	3.00	3.27	3.53	3.72	3.77	7.64
58. MISC. ELECTRICAL MACH. & EQ.	0.33	0.38	0.41	0.45	0.49	0.51	9.10
59. MOTOR VEHICLES & EQUIPMENT	1.02	1.21	1.37	1.63	1.90	2.22	16.96
60. AIRCRAFT & PARTS	4.98	5.47	5.88	6.32	6.58	6.57	5.77
61. OTHER TRANSPORTATION EQ.	5.99	6.30	6.49	6.61	6.81	7.00	3.16
62. INSTRUMENTS & SUPPLIES	2.11	2.36	2.55	2.78	2.94	3.02	7.44
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	0.53	0.58	0.62	0.68	0.72	0.75	7.26
64. MISC. MANUFACTURING	0.35	0.38	0.40	0.43	0.45	0.47	6.18
65. TRANSPORTATION & WAREHOUSING	16.12	17.09	17.90	19.04	19.85	20.27	4.68
66. COMMUNICATION EXC. RADIO & TV	0.07	0.08	0.08	0.09	0.10	0.10	5.85
68. UTILITIES	1.28	1.40	1.51	1.63	1.71	1.75	6.48
69. WHOLESALE & RETAIL TRADE	8.69	9.80	10.77	11.91	12.86	13.50	9.21
70. FINANCE & INSURANCE	0.04	0.05	0.05	0.06	0.06	0.07	10.28
71. REAL ESTATE & RENTAL	1.29	1.44	1.58	1.73	1.86	1.94	8.59
72. PERSONAL SERVICES EXC. AUTO.	1.06	1.20	1.32	1.46	1.58	1.68	9.72
73. BUSINESS SERVICES	3.93	4.53	5.09	5.75	6.29	6.66	11.11
74. EATING & DRINKING PLACES	0.10	0.11	0.13	0.14	0.15	0.15	8.89
75. AUTOMOBILE REPAIR & SERVICE	0.99	1.10	1.20	1.31	1.40	1.45	7.95
76. AMUSEMENTS	0.52	0.58	0.64	0.70	0.76	0.81	9.20
77. MISC. SERVICES	1.18	1.20	1.24	1.30	1.35	1.37	3.01
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	11.43	11.88	12.41	13.05	13.47	13.67	3.85
82. GOVERNMENT INDUSTRY	58.94	57.58	58.48	59.88	60.66	60.87	0.65
TOTAL, ALL INDUSTRIES	205.04	219.09	231.72	247.55	259.70	267.11	5.43

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## TOTAL EMPLOYMENT

DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
162. LABORS, EXCEPT FARM  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG ANN % GROWTH 82 TO 87
3. FORESTRY & FISHERY PRODUCTS	20 61	21.73	23.11	24.07	24.10	23.79	2.91
4. AGR., FORESTRY, & FISHERY SERV.	89 50	91.98	92.98	95.00	96.15	97.69	1.77
5. IRON ORE MINING	5.50	5.91	8.32	6.26	6.14	6.00	1.76
6. NONFERROUS METAL MINING	8.68	9.17	9.55	9.80	9.75	9.83	2.52
7. COAL MINING	28 98	30.42	31.51	32.25	33.28	33.97	3.23
8. CRUDE PETROLEUM & N. GAS	9.37	9.28	9.18	8.93	8.73	8.72	-1.42
9. STONE & CLAY MINING & QUARRYING	10.04	10.25	10.59	11.04	11.28	11.37	2.52
10. CHEM. & FERTILIZER MIN. MINING	2.19	2.24	2.32	2.37	2.39	2.41	2.01
11. NEW CONSTRUCTION	755.64	773.04	790.21	816.82	838.09	851.24	2.41
13. ORDNANCE & ACCESSORIES	8.94	9.10	9.22	9.39	9.48	9.54	1.31
14. FOOD & KINDRED PRODUCTS	205.10	209.00	211.37	211.73	210.77	210.16	0.49
15. TOBACCO MANUFACTURES	15.18	15.17	14.98	14.73	14.56	14.26	-1.20
16. FABRIC, YARN & THREAD MILLS	38.74	39.46	40.08	40.43	40.36	39.98	0.63
17. MISC. TEXTILE GOODS	9.79	10.17	10.58	10.93	11.11	11.19	2.71
18. APPAREL	46.08	46.41	47.41	48.25	48.25	48.22	0.91
19. MISC. FABRICATED TEXTILE PROD	15.32	15.68	16.08	16.36	16.53	16.67	1.70
20. LUMBER & WOOD PRODUCTS	120.13	129.13	133.12	137.13	137.57	135.39	2.42
21. WOOD CONTAINERS	7.37	7.36	7.50	7.69	7.77	7.81	1.16
22. HOUSEHOLD FURNITURE	30.65	32.26	33.25	34.31	35.00	35.27	2.85
23. OTHER FURNITURE & FIXTURES	15.14	15.22	15.67	16.11	16.43	16.74	2.03
24. PAPER & ALLIED PRODUCTS	56.06	57.62	58.12	58.22	58.07	57.89	0.65
25. PAPERBOARD CONTAINERS & BOXES	24.31	24.92	25.45	25.90	26.14	26.26	1.56
26. PRINTING & PUBLISHING	43.29	43.04	42.95	42.86	42.63	42.38	-0.42
27. CHEMICALS & PRODUCTS	24.48	24.61	24.67	24.60	24.45	24.29	-0.16
28. PLASTICS & SYNTHETIC MATLS.	7.58	7.72	7.86	7.92	7.88	7.76	0.48
29. DRUGS, CLEANING & TOILET PREP	19.13	18.95	18.94	18.87	18.59	18.35	-0.83
30. PAINTS & ALLIED PRODUCTS	4.17	4.33	4.44	4.56	4.61	4.63	2.10
31. PET REFINING & REL. PROD.	12.41	12.31	12.30	12.33	12.26	12.16	-0.40
32. RUBBER & MISC. PLASTICS PROD.	58.86	60.51	62.71	64.41	65.73	66.09	2.34
33. LEATHER TANNING & FINISHING	2.91	3.01	3.11	3.11	3.11	3.10	1.31
34. FOOTWEAR & OTHER LEATHER PROD	14.41	14.41	14.43	14.35	14.19	14.04	-0.52
35. GLASS & GLASS PRODUCTS	18.28	18.60	18.95	19.11	19.04	18.89	0.66
36. STONE & CLAY PRODUCTS	54.15	55.15	55.99	57.28	57.46	56.67	0.91
37. PRIMARY FERROUS METALS	96.80	99.73	102.82	104.06	104.42	103.93	1.43
38. NONFERROUS METALS	43.11	44.52	46.13	47.28	47.84	48.32	2.30
39. METAL CONTAINERS	10.61	10.46	10.48	10.67	10.74	10.80	0.36



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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
162. LABORS, EXCEPT FARM  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
40. FAB. STRUCTURAL METAL PRODUCTS	48.51	48.20	48.97	50.20	50.87	51.15	1.07
41. SCREW MACHINE PROD.&STAMPINGS	23.80	25.04	25.86	26.32	26.47	26.59	2.24
42. OTHER FAB. METAL PRODUCTS	32.01	32.66	33.74	34.45	34.89	35.35	2.01
43. ENGINES & TURBINES	4.18	4.23	4.30	4.26	4.20	4.14	-0.21
44. FARM & GARDEN MACHINERY	5.44	5.58	5.87	5.95	6.02	6.08	2.27
45. CONSTR. & MINING MACHINERY	11.18	11.60	11.98	12.19	12.30	12.24	1.82
46. MATERIALS HANDLING MACH. & EQ.	4.00	4.05	4.21	4.31	4.35	4.37	1.80
47. METALWORKING MACH. & EQ.	8.13	8.31	8.65	8.85	8.94	8.96	1.95
48. SPECIAL INDUSTRY MACHINERY	6.45	6.48	6.69	6.87	6.92	6.95	1.49
49. GENERAL INDUSTRY MACHINERY	9.47	9.48	9.70	9.73	9.67	9.60	0.28
50. MISC. NONELECTRICAL MACH.	3.90	3.93	4.03	4.05	4.02	4.01	0.57
51. OFFICE, COMPUTING & ACCT. MACH.	6.45	6.46	6.49	6.38	6.25	6.18	-0.85
52. SERVICE INDUSTRY MACHINES	10.64	10.91	11.28	11.32	11.20	11.07	0.78
53. ELECTRICAL MACHINERY	12.95	12.90	13.20	13.23	13.11	12.96	0.01
54. HOUSEHOLD APPLIANCES	10.33	10.57	10.81	11.13	11.33	11.44	2.06
55. ELECTRIC LIGHTING & WIRING EQ.	14.98	15.01	15.34	15.64	15.81	15.95	1.25
56. RADIO, TV, & COMMUNICATION EQ.	20.90	20.90	21.06	20.93	20.64	20.51	-0.38
57. ELECTRONIC COMPONENTS & ACCESS.	11.91	12.00	12.18	12.25	12.18	12.02	0.18
58. MISC. ELECTRICAL MACH. & EQ.	12.18	12.55	12.99	13.08	13.19	13.24	1.69
59. MOTOR VEHICLES & EQUIPMENT	52.51	54.80	56.57	57.39	57.93	58.18	2.07
60. AIRCRAFT & PARTS	9.94	10.08	10.09	10.14	9.89	9.62	-0.66
61. OTHER TRANSPORTATION EQ.	20.68	21.25	21.96	22.39	22.41	22.56	1.75
62. INSTRUMENTS & SUPPLIES	18.11	18.29	18.87	19.46	19.83	20.02	2.02
63. OPTICAL, OPHTHALMIC & PHOTO EQ.	12.26	12.28	12.65	13.05	13.32	13.50	1.96
64. MISC. MANUFACTURING	31.35	31.89	32.97	33.95	34.54	34.85	2.13
65. TRANSPORTATION & WAREHOUSING	379.24	388.92	398.01	408.87	412.55	413.67	1.75
66. COMMUNICATION EXC. RADIO & TV	2.99	3.03	3.13	3.18	3.27	3.32	2.12
68. UTILITIES	59.34	59.68	59.97	60.24	60.56	60.79	0.48
69. WHOLESALE & RETAIL TRADE	1,420.68	1,460.52	1,500.29	1,533.09	1,557.64	1,583.40	2.19
70. FINANCE & INSURANCE	4.80	4.92	5.07	5.24	5.42	5.60	3.13
71. REAL ESTATE & RENTAL	46.80	47.90	49.19	50.41	51.38	52.18	2.20
72. PERSONAL SERVICES EXC. AUTO.	57.59	59.29	61.26	63.25	65.24	67.09	3.10
73. BUSINESS SERVICES	81.07	85.86	90.99	96.69	101.88	106.44	5.60
74. EATING & DRINKING PLACES	6.55	6.61	6.66	6.67	6.66	6.64	0.26
75. AUTOMOBILE REPAIR & SERVICE	68.35	70.19	71.31	72.12	72.98	74.01	1.60
76. AMUSEMENTS	53.58	54.75	56.69	58.43	60.29	62.02	2.97
77. MISC. SERVICES	183.53	183.97	184.95	187.24	190.18	193.65	1.08
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	253.14	258.55	264.03	269.41	272.93	275.61	1.72
82. GOVERNMENT INDUSTRY	420.45	415.04	414.29	416.10	418.02	421.00	0.03

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
162. LABORS, EXCEPT FARM  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
TOTAL, ALL INDUSTRIES	5,488.06	5,605.35	5,724.13	5,840.74	5,916.97	5,975.26	1.72

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.

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DEFENSE ECONOMIC IMPACT MODELING SYSTEM  
OCCUPATION BY INDUSTRY MODEL  
ESTIMATES OF INDUSTRIAL EMPLOYMENT BY OCCUPATION  
163. FARMERS&FARM WORKERS  
(THOUSANDS OF PERSONS)

INDUSTRY	82	83	84	85	86	87	AVG. ANN % GROWTH 82 TO 87
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DEFENSE INDUCED EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	2.54	2.65	2.71	2.78	2.90	3.00	3.43
2. OTHER AGRICULTURAL PRODUCTS	4.07	4.02	4.22	4.42	4.58	4.68	2.81
4. AGR., FORESTRY, & FISHERY SERV.	0.56	0.61	0.64	0.70	0.74	0.78	6.86
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	37.80	39.83	41.37	43.11	44.37	45.05	3.57
TOTAL, ALL INDUSTRIES	44.97	47.10	48.93	51.00	52.59	53.51	3.54
TOTAL EMPLOYMENT							
1. LIVESTOCK & PRODUCTS	411.07	417.33	413.71	409.54	410.35	411.03	0.00
2. OTHER AGRICULTURAL PRODUCTS	2,724.26	2,736.00	2,749.87	2,741.43	2,736.70	2,733.78	0.07
4. AGR., FORESTRY, & FISHERY SERV.	30.21	31.04	31.37	32.06	32.45	32.97	1.76
81. SELF-EMPLOYED & UNPAID FAMILY WORKERS	5,786.02	5,820.45	5,839.80	5,818.00	5,811.53	5,808.39	0.08
TOTAL, ALL INDUSTRIES	8,951.61	9,004.88	9,034.81	9,001.09	8,991.08	8,986.23	0.08

NOTE: INDUSTRY EMPLOYMENT ESTIMATES ARE BASED ON THE  
BLS ESTABLISHMENT SURVEY, NOT THE BEA COMMODITY SURVEY.